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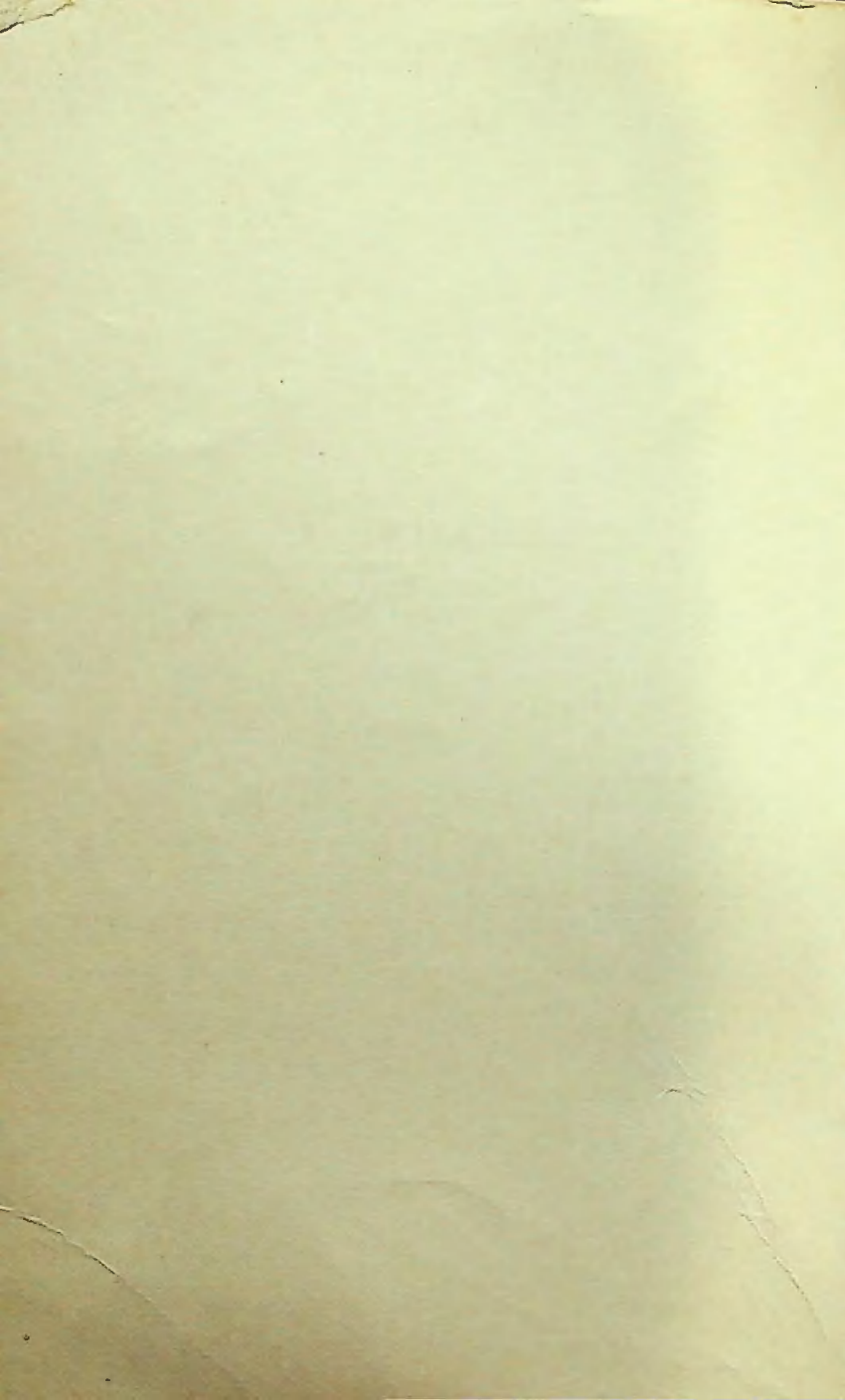
**EPHEMERIS OF**

**PLANETARY POSITIONS**

**(1891 to 2000 AD)**

**Revised & Enlarged Edition**

**B.V. Raman**



**RAMAN'S**  
**One Hundred and Ten-Year Ephemeris**  
**of**  
**PLANETARY POSITIONS**  
**(1891 to 2000 A.D.)**

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**REVISED & ENLARGED EDITION**

**BANGALORE VENKATA RAMAN**  
*Editor : THE ASTROLOGICAL MAGAZINE*



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## PREFACE TO FIRST EDITION

The idea to bring out an Ephemeris covering not only our time but also the last decade of the last century, had persisted for a long time. However, it began to take concrete shape a decade ago largely due to the pressure brought to bear upon me by the innumerable readers of THE ASTROLOGICAL MAGAZINE and my other publications.

Ephemerides published in foreign countries were available till about 10 years ago though at exorbitant prices. Hence the need for a publication of this type became all the more necessary.

It seemed highly desirable that an ephemeris capable of meeting the demands of astrological students and savants and those interested in the study of astrology all over the world irrespective of their preference — Sayana (tropical,) or Nirayana (Sidereal) — and reasonably accurate and easy to consult should be made available.

RAMAN'S NINETY-YEAR EPHEMERIS covers a period of 90 years (1891 to 1980) so that the birth dates of most of the persons alive today are covered. The ephemeris covering the coming few years will be of much use to astrological practitioners for timing events on the basis of transits.

In compiling this Ephemeris, no originality can be claimed. Full use has been made of astronomical facts, tables and mathematical results already computed by others. Acknowledgement courtesies are due to:

*Astrilogische Ephemeriden*, *American Astrology Tables of Houses*, *Baumgartner's Ephemeriden* (1850-2000), *Positions Planetaires* (1840 to 2000), the *Deutsche Ephemerides* and *Stallman's Solar and Planetary Longitudes for Years* — 2000 to + 2000.

This Ephemeris can be used universally, as planetary positions given are Sayana (tropical). Students of Hindu astrology will be able to use it not only for casting horoscopes according to the Nirayana (sidereal) system but also for finding the *thithi* (lunar day), the *nakshatra* (constellation) and the *yoga* which are necessary elements of Hindu astrology.



The use of this ephemeris with an Example has been discussed in the Introduction.

While a copy each of the (a) *Ninety-Year Ephemeris*, (b) *A Manual of Hindu Astrology* and (c) *Nirayana Tables of Houses* will place in the hands of a student of astrology all the information needed to correctly compute the horoscope for any date between the years 1891 to 1980 A.D. one can also cast a horoscope fairly correctly even without (b) and (c) as Condensed Tables of Houses given in Table II cover ascendant and tenth house longitudes for ten degree intervals of latitude and 16<sup>m</sup> intervals of Sidereal Time.

Appreciation is extended to Sri T. S. Kalyanaraman and to my children Gayatri Devi Raman, B. Niranjana Babu and B. Satchidananda Babu for their assistance in making the calculations.

Finally I wish to thank Mr. P.N. Kamat and Mr. G.K. Anantharam of IBH Prakashana for having readily come forward to publish the book in an attractive form.

BANGALORE :

24-12-1973.

B. V. RAMAN

## PREFACE TO THE TENTH EDITION

THE tenth edition appearing so soon after the ninth edition is testimony of the popularity of the ephemeris with its users. This combined edition of the Ninety Year Ephemeris and the Twenty Year Ephemeris contains information for 110 years in one volume from 1891 to 2000 A.D.

The demand for this Ephemeris has been exceedingly high.

UBS Publishers' Distributors Ltd., New Delhi, deserves to be thanked for their promptness in bringing out quickly this combined enlarged edition.

B.V. RAMAN

"Sri Rajeswari"  
Bangalore-560 020  
1st February, 1992

## INTRODUCTION

The computation of this Ephemeris has been done for 5-30 p.m. Indian Standard Time (I.S.T.) or Greenwich Mean Noon.

As already indicated, all planetary positions are Sayana or tropical ; and to get the Hindu or Nirayana positions, the Ayanamsa for the year in question is to be deducted.

The positions of the Sun, Mars, Jupiter, Venus, Saturn and Rahu are given at ten-day intervals. The Moon's position is given for every alternate day. The position of Mercury is given at five-day intervals. The positions of Uranus, Neptune and Pluto are given for the first of every month.

The planetary positions for any given date and time can be ascertained by interpolation, as per the example given below :

### AYANAMSA

The Ayanamsa for the beginning of each year adopted by THE ASTROLOGICAL MAGAZINE is given at the foot of each year's ephemeris and also in Table IX.

For astrological purposes, it is enough if the Ayanamsa given in the Ephemeris is deducted from the Sayana positions. If greater accuracy is desired, the precessional value for the number of months passed from the beginning of the year can be ascertained by dividing the difference between the two values of the two years by 12.

The Table of longitudes and latitudes covers important places all the world over.

### TIME CORRECTIONS

In India, Standard Time, now observed, was introduced on 1-1-1906. Before this date, local mean time was in vogue. Or the births used to be recorded in terms of *ghatis* (or *pals* or *naligais*) and *vighatis* (or *vipals* or *vinadis*), each *ghati* being equal to 24 minutes and each *vighati* being equal to 24 seconds. By converting the *ghatis*



and *vighatis* into hours and minutes and adding the same to the time of sunrise, we can get the birth time in hours and minutes.

Subsequently the old railway time was in vogue. This was local time of Madras. Therefore the old railway time can be converted into I.S.T. by merely adding 9 minutes to it.

Advanced Standard Time was observed from 1-9-1942 to 15-10-1945 for war purposes. Therefore times of birth recorded during this period should be reduced by one hour.

## SUMMER TIME

In recent years in some countries in Europe and America, Day-light Saving or Summer Time is used during certain periods of the year. This Summer Time is generally one hour ahead of the standard time. Countries in which Summer Time is used can be ascertained from other authoritative sources.

### Calculating the Geo-centric Positions of Planets

Let us erect the horoscope of a person born on August 8, 1895 at 4h. 30m. p.m. (I.S.T.) at Bangalore, Long.  $77^{\circ} 35'$  (or 5h. 10m. 20s.) E and Lat.  $13^{\circ}$  N.

(a) Since the time of birth is given in \*Standard Time, convert it into Local Mean Time. Bangalore is located  $4^{\circ} 55'$  West of Standard Time longitude viz.,  $82^{\circ} 30'$ . Hence we have to deduct from the time of birth 19m. 40s. (the difference between standard longitude and local longitude being  $4^{\circ} 55'$ , the time equivalent will be 19m. 40s, at the rate of 4 minutes of time per  $1^{\circ}$  longitude).

The local mean time of birth will be 4h. 10m. 20s. p.m.

The Ephemeris is calculated for 5-30 p.m. (I.S.T.) or 12 noon (G.M.T.)

This means the positions are correct for 5h. 10m. 20s. L.M.T. Bangalore, or 4h. 51m. 16s. p.m. (L.M.T.) at Bombay or 12h. 58m. p.m. (L.M.T.) Berlin and so on.

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\* In actual practice, for getting planetary positions, no conversion to L.M.T. is needed for births in India. Simply take the difference between the time of birth (I.S.T.) and 5-30 p.m. For births recorded before I.S.T. was introduced, the L.M.T. may be converted into I.S.T. Or in the alternative, the L.M.T. equal to 5-30 p.m. (I.S.T.) can be taken and the difference between this and the time of birth found out.

The positions required for 4th. 10m. 20s. p.m. (L.M.T.)  
8-8-1895

Required: *The Position of the Sun:*

|   |              |
|---|--------------|
| From Ephemeris: 13th August:                            | 140° 27'     |
| 3rd August:   | 130° 51'     |
| Motion in 10 days:                                      | 9° 36'       |
| Motion in 1 day   | 0° 57' 36"   |
| Motion in 1 hour  | 0° 2' 24"    |
| Ephemeris position on 3rd August:<br>(5-30 p.m. I.S.T.) | 130° 51' 0"  |
| For 5 days from 3rd Aug. to 8th Aug:                    | 4° 48'       |
| ∴ Position on 8th August:                               | 135° 39'     |
| Less motion in 1 hour                                   | 0° 2' 24"    |
| Position at birth time                                  | 135° 36' 36" |
| - Leo   | 15° 36' 36"  |
| This is the Sayana or Western position.                 | 135° 36' 36" |
| Deducting the year's Ayanamsa:                          | 20° 56' 39"  |
| The Hindu or Nirayana position                          | 114° 39' 57" |
| - Cancer  | 24° 40'      |

*The Position of the Moon:*

|  |              |
|--|--------------|
| From Ephemeris: 9th August                             | 359° 13'     |
| 7th August   | 335° 38'     |
| Motion in 2 days.                                      | 23° 35'      |
| Motion in 1 day  | 11° 47' 30"  |
| Motion in 1 hour                                       | 29' 29"      |
| Moon's position on 7th August                          | 335° 38'     |
| Add 1 day's motion                                     | 11° 47' 30"  |
| Moon's position on 8th August<br>(at 5-30 p.m. I.S.T.) | 347° 25' 30" |

Since the birth time is at 4h. 10m. 20s. p.m. and the Ephemeris is given for 5th. 10m. 20s. p.m. (L.M.T.) or 5-30 p.m. (I.S.T.) deduct from the above

|                          |              |
|--------------------------|--------------|
| 1 hourly motion:         | 0° 29' 29"   |
| Moon's position at birth | 346° 56' 01" |
| - Pisces                 | 16° 58' 01"  |

This is the Sayana or Western position.

Deduct the year's Ayanamsa to get the Nirayana or Hindu position.

|                 |        |             |
|-----------------|--------|-------------|
| Sayana position | Pisces | 16° 56' 01" |
| Ayanamsa        |        | 20° 56' 39" |

The Moon's Nirayana position is Aquarius  
(Kumbha) 25° 59' 22"

Reference to the table of Nakshatras (Table IV) reveals that Aquarius 20° to Pisces 3° 20' falls in Poorvabhadrapada.

The ecliptic is divided into 27 constellations of 13° 20' (or 800' of arc) each. Reduce the longitude of the Moon (or any planet) to minutes and divide the same by 800. The quotient is the number of constellations already passed : and the remainder, the part covered in the current asterism the Moon is in. In this example:

|                       |                      |
|-----------------------|----------------------|
| Aquarius              | 25° 59' 22"          |
| =                     | 10 signs 25° 59' 22" |
| =                     | 325° 59' 2"          |
| =                     | 19559' 22"           |
| Dividing this by 800: | 19559' 22"           |
|                       | <hr/> 800            |
| =                     | Quotient 24          |
|                       | remainder 359' 22"   |

The ruling star is the 25th, viz., Poorvabhadra. 359' 22" have been covered in this star and the balance to be traversed is (800'-359' 22")

$$= 440' 38" \text{ or } 440' \text{ or } X.$$

Corresponding to this balance (X) the period of the Planet (i.e., the lord of the ruling star) remaining at the time of birth can be ascertained thus: (See Table V).

$$\frac{X \times \text{Dasa years of the lord of the ruling star}}{800}$$

In this case the lord of the ruling star being Jupiter and his total period being 16 years, the period remaining at the time of birth will be

$$\frac{440' 38" \times 16}{800} = \text{Yrs. } 8-9-25$$

Reference to Table V gives the ruling Dasa and the balance at the time of birth on the basis of the Moon's position. The Moon here is in Aquarius  $25^{\circ} 59' 22''$ . For this Table V gives:

Balance of Jupiter's Dasa ■ yrs. 8-9-25.

### Thithi (Lunar Day)

Each thithi or lunar day is equal to .9483 of ■ day so that a lunar month is equal to about 29.53 days. The ending time of ■ thithi is the moment at which the Moon is removed from the Sun by multiples of  $12^{\circ}$ . Thus when the Moon is  $12^{\circ}$  away from the Sun, the first lunar day or Prathamī ends; when  $24^{\circ}$  Dwitīya and so on; when in conjunction the Amavasya (New Moon), and when in opposition ( $180^{\circ}$ ) Pournimasya, (full Moon) ends.

It is enough for astrological purposes to know what *thithi* rules at the time of birth.

To find the lunar date or *thithi* deduct the longitude of the Sun from that of the Moon. If the difference is less than  $180^{\circ}$ , it is the bright half or Sukla Paksha; if it is more than  $180^{\circ}$ , it is dark half or Krishna Paksha.

Divide the balance (Moon-Sun) by  $12^{\circ}$  (or 720'). The quotient represents the number of *thithis* elapsed and the remainder the part of the of the next (i.e., current) thithi that has elapsed.

Thus to know the *thithi* ruling ■ 8-8-1895 at the given time: First we deduct the longitude of the Sun ( $114^{\circ} 40'$  or 6880') from that of the Moon ( $326^{\circ}$  or 19560'). The remainder is  $211^{\circ} 20'$  (12680'). It is more than  $180^{\circ}$  and hence it is the dark half (Krishna Paksha). day is the 18th (or 3rd lunar day of the dark half).  $440'$  ( $7^{\circ} 20'$ ) of its portion has been traversed, leaving  $280'$  ( $4^{\circ} 40'$ ) yet to be traversed. If portion has been traversed, leaving  $300'$  ( $5^{\circ}$ ) yet to be traversed. If the remainder is multiplied by 24 and divided by the difference of the daily motions of the Sun and the Moon, we get the number of hours (from the time of birth) still covering the thithi in question.

|  |                  |
|--|------------------|
| The daily motion of the Moon on the day of birth | $11^{\circ} 47'$ |
| *Daily motion of the Sun                         | $57'$            |
|  | <hr/>            |
|  | $10^{\circ} 50'$ |
| Difference :                                     | $=$              |
|  | $650'$           |

■ For convenience sake ■ than  $30^{\circ}$  are taken ■  $1'$  and less than  $30^{\circ}$  rejected.

Multiplying 280 by 24 and dividing the product by 650 we get

$$\frac{280 \times 24}{650} = 10\text{h. } 20\text{m.}$$

which added to the time of birth gives 2-30 a.m. (L.M.T.) (on 9th August) which will be the ending moment of the thithi (3rd lunar day of the dark half).

## YOGA

There are 27 Yogas.

Yoga is the period during which the joint motion in longitude of the Sun and the Moon amounts to  $13^{\circ} 20'$  of arc. The following formula is according to Suryasiddhanta.

$$\frac{\text{Sun's longitude} + \text{Moon's longitude}}{13^{\circ} 20' \text{ (or } 800')}$$

Taking the example :

|                  |           |
|------------------|-----------|
| Sun's longitude  | 114°-40'  |
| Moon's longitude | 326°- 0'  |
| Total            | 440°-40'  |
|                  | - 80°-40' |
|                  | = 4840'   |

Dividing 4840' by 800 we get quotient 6 and remainder 40.6 Yogas have transpired and the 7th viz., Sukarman is ruling. 40' is the part of the current (Sukarman) yoga that has elapsed. Yet to be covered in this yoga is 760'. To ascertain the time at which the current yoga ends, divide the remainder (40') by the sum of the daily motions of the Sun and the Moon ( $0^{\circ} 57' + 11^{\circ} 47' = 12^{\circ} 44'$  or 764') and multiply by 24 to reduce the results to hours :

$$\frac{760 \times 24}{764} = 23\text{h } 52\text{m}$$

The Sukarman Yoga ends at 23h. 52m. from the time of birth.

The Table of Yogas (Table VI) enables one to ascertain the Yoga on the basis of the joint motion of the Sun and the Moon.

Thus in the example the sum of the Sun's and the Moon's longitude is  $80^{\circ} 40'$ . According to Table VI Sukarman commences at  $80^{\circ}$  and extends till  $93^{\circ} 20'$ .



## ANOTHER EXAMPLE

Let us erect the horoscope of a person born on 22-9-1951 at 9-35 p.m. (I.S.T.) at Bangalore, Lat.  $13^{\circ}$  N, Long.  $77^{\circ} 30'$  E. (or 5h. 10m. 20s. E.)

Two steps are involved, viz., (a) Determining planetary positions and (b) Determining the Lagna.

## PLANETARY POSITIONS

As the positions of planets are given at 5-30 p.m. I.S.T. (or Greenwich Mean Noon) take the difference between 5-30 p.m. and time of birth (I.S.T.)

|                     |   |                |          |
|---------------------|---|----------------|----------|
| Time of Birth       | - | 9-35 p.m.      | (I.S.T.) |
| Positions given for | - | 5-30 p.m.      | (I.S.T.) |
| Difference          |   | <u>4h. 5m.</u> |          |

This can also be termed Interval.

## \*THE SUN

|                                      |   |               |
|--------------------------------------|---|---------------|
| From Ephemeris: 2nd October 1951     | - | 188° 30'      |
| 22nd September                       | - | 178° 41'      |
| Motion in 10 days                    |   | <u>9° 49'</u> |
| Motion in 1 day (24 hours)           | - | 59'           |
| Motion in 1 hour                     |   | 2° 27' 5'     |
| Ephemeris position on 22nd September |   | 178° 41'      |
| Motion in 4h. 5m.                    |   | <u>0 10'</u>  |
| Position (Sayana) at birth           |   | 178° 51' 0"   |
| *Less Ayanamsa for 1951              |   | <u>21.44</u>  |
| Sun's Hindu or Nirayana Position     |   | 157° 7'       |
|                                      | - | Virgo 7° 7'   |

\* In reckoning daily motion or Ayanamsa, less than 30' is rejected and more than 31' considered as 1°.

## THE MOON

|  |                     |
|--|---------------------|
| Moon's Position on 21st September            | 69° 15'             |
| Motion in 1 day                              | 11 58               |
| Motion in 4h. 5m.                            | <u>2° 2' 10"</u>    |
| Moon's (Sayana) Position on 22nd September   | 83 15 10            |
| at birth time                                | <u>21 43 37</u>     |
| Less Ayanamsa                                | 61 31 33            |
| Hindu or Nirayana Position                   | - Gemini 1° 31' 33" |
| Reference Table: The Moon is in Mrigasira 3. |                     |

## MARS

|                                    |                   |
|------------------------------------|-------------------|
| October 2nd                        | - 148° 23'        |
| September 22nd                     | - <u>142 15</u>   |
| Motion in 10 days                  | 6° 13'            |
| Motion in 1 day                    | - 37'             |
| Motion in 4h. 05m.                 | - 6'              |
| ∴ Sayana position of Mars at birth | - <u>142° 21'</u> |
| Nirayana position of Mars          | - <u>120° 37'</u> |
| - Leo 0° 37' - Makha 1             |                   |

## MERCURY

|                              |                   |
|------------------------------|-------------------|
| October 2nd                  | - 179° 49'        |
| September 22nd               | - <u>162 37</u>   |
| Motion in 10 days            | 17° 12'           |
| Motion in 1 day              | - 1° 43'          |
| Motion in 4h. 05m.           | - 0° 17'          |
| ∴ Sayana position at birth   | - <u>162° 37'</u> |
|                              | + 17'             |
|                              | <u>162° 54'</u>   |
| Nirayana position of Mercury | - 141° 10'        |
| - Leo 21° 10' - Pubba 3      |                   |

### JUPITER

|                        |   |         |
|------------------------|---|---------|
| October 2nd            | = | 9° 14'  |
| September 22nd         | = | 10° 33' |
| Motion (R) in 10 days  | = | 1° 19'  |
| Motion (R) in 1 day    | = | 0° 8'   |
| Motion (R) in 4h. 05m. | = | 0° 1'   |

∴ Sayana position of Jupiter (R) at birth = 10° 32' = 370° 32'

Nirayana position of Jupiter (R) at birth = 348° 48'

= Pisces 18° 48' = Revati 1

### VENUS

|                    |   |          |
|--------------------|---|----------|
| October 2nd        | = | 153° 9'  |
| September 22nd     | = | 152° 15' |
| Motion in 10 days  | = | 0° 54'   |
| Motion in 1 day    | = | 0° 5'    |
| Motion in 4h. 05m. | = | 0° 1'    |

∴ Sayana position of Venus (R) at birth = 152° 14'

Nirayana position of Venus (R) = 130° 30'

= Leo 10° 30' = Makha 1

### SATURN

|                    |   |          |
|--------------------|---|----------|
| October 2nd        | = | 185° 52' |
| September 22nd     | = | 184° 37' |
| Motion in 10 days  | = | 1° 15'   |
| Motion in 1 day    | = | 0° 8'    |
| Motion in 4h. 05m. | = | 0° 1'    |

∴ Sayana position of Saturn at birth = 184° 38'

Nirayana position of Saturn = 162° 54'

= Virgo 12° 54' = Hasta 1

### URANUS

|                   |   |          |
|-------------------|---|----------|
| October 1st       | = | 103° 50' |
| September 1st     | = | 102° 57' |
| Motion in 30 days | = | 0° 53'   |

\* Jupiter is retrograde and hence the backward motion.

|                                      |                      |
|--------------------------------------|----------------------|
| Motion in 1 day                      | - 0° 1' 46"          |
| Motion in 21 days                    | - 0° 37' 8"          |
| Sayana position of Uranus at birth   | - 103° 34' 6"        |
| Nirayana position of Uranus at birth | - 81° 50' 29"        |
|                                      | - Gemini 21° 49' 24" |
|                                      | - Aslesha 2          |

## NEPTUNE

|                                       |                 |
|---------------------------------------|-----------------|
| October 1st                           | - 198° 52'      |
| September 1st                         | - 197° 40'      |
| Motion in 30 days                     | - 1° 3'         |
| Motion in 21 days                     | - 0° 44'        |
| ∴ Sayana position of Neptune at birth | - 198° 33'      |
| Nirayana position of Neptune at birth | - 176° 49'      |
|                                       | - Virgo 26° 49' |
|                                       | - Chitta 2      |

## \*RAHU

|                                    |                                   |
|------------------------------------|-----------------------------------|
| October 2nd                        | - 338° 16'                        |
| September 22nd                     | - 338° 47'                        |
| Motion in 10 days                  | - — 31'                           |
| Motion in 1 day                    | - — 3'                            |
| ∴ Sayana position of Rahu at birth | - 338° 47'                        |
| Nirayana position of Rahu at birth | - 217° 03'                        |
|                                    | - Aquarius 17° 03' - Satabhisha 4 |

## DETERMINING LAGNA OR ASCENDANT

The Condensed Tables of Houses (Table III) and the Table of Sidereal Time (Tables I and II) should enable one to calculate the Lagna or the ascendant point fairly accurately.

The Table of Sidereal Time is for Ujjain local noon.

This can generally be used for all places in India without much difference and hence without any correction.

By adding  $50 \frac{2}{3}$  seconds to this, the Sidereal Time for G.M.N. (Greenwich Mean Noon) is obtained.

Greenwich is 75° 50' (or 5h. 3m. and 20s.) West of Ujjain. The longitudinal correction of  $50 \frac{2}{3}$ s. (at the rate of approximately 10

\* Rahu's motion is always backward. Add 180° to Rahu to get Kethu's position.

seconds per hour or  $15^\circ$  of longitude) is positive. Therefore the Sidereal Time for Greenwich Mean Noon is obtained by simply adding 50  $\frac{1}{2}$ s. (or round figure 51 seconds) to the Sidereal Time given in Table I.

For example according to Table No. I Sidereal Time at local Ujjain Mean Noon on 1-1-1900 is 18h. 41m. 53s. Adding correction of 51s. we get the S. T. at Greenwich Mean Noon as 18h. 42m. and 44s. (*The Die Deutsche Ephemeride* for 1900 gives the same value).

It is very necessary that the time of birth (generally given in Standard Time) should be converted into its equivalent local mean time.

1. From Table I find the figure corresponding to the year in question. Let it be denoted by Y.

2. From Table II take the figure corresponding to the date in question. Let it be denoted by D.

(In the case of a leap year, if the date concerned lies between March 1 and December 31, take the next date.)

3. Find I—Interval of time between the Mean Noon and the required moment given in Local Mean Time. This is positive or negative according as the given moment is after or before Mean Noon.

4. Find K, the motion of Sidereal Time corresponding to 'T', to be calculated at the rate of 0.0002 seconds (roughly 10 seconds) per mean solar hour or 10 seconds per hour. This is + if the time of birth is after the noon and - if before noon.

5. Find C the longitudinal correction in the Sidereal Time for the place. It is negative or positive according as the place is to the East or to the West of Ujjain, which is  $75^\circ 50'$  East of Greenwich.

$$\text{The required Sidereal Time} = Y + D \pm I \pm K \pm C$$

In the above example: Since the time of birth is given as 9-35 p.m. i.e., (I.S.T.) its equivalent L.M.T. — (difference in time between standard longitude and local longitude to be deducted from or added to I.S.T. according to the place of birth is west or east of the standard longitude, viz.,  $82^\circ 30'$  or 5h. 30m.) — is 9h. 15m. 20s, which for convenience can be taken as 9h. 15m. p.m.



The Sidereal Time of Birth in the example horoscope will be :

|     | h  | m  | s  |
|-----|----|----|----|
| Y = | 18 | 40 | 27 |
| D = | 17 | 20 | 51 |
| I = | 09 | 15 | 00 |
| K = | 00 | 01 | 30 |
|     | 45 | 17 | 48 |

Expunging multiples of 24 from this sum, we get S.T. of birth  
= 21h. 17m. 48s. or 21h. 18m.

We proceed thus :

- (a) Place of birth 13° N Lat.  
(b) Sidereal Time of birth 21h. 18m.

### FIRST STEP

- (a) Lagna at 10° N Lat. for S.T. 21h. 04m = Taurus 21° 45'  
(Table III)
- (b) -do- 21h. 20m = " 25° 51'
- (c) Increase in Lagna for a rise in 16m. S.T. = 4° 6'
- (d) S.T. time at birth (21h. 18m.) is ahead of S.T. of (a) by 14m.
- (e) Therefore increase in Lagna for 14m. is  $\frac{4^{\circ} 6' \times 14}{16} = 3^{\circ} 35'$
- (f) Lagna at 10° N Lat. to S.T. 21h. 18m. = 21° 45'  
3° 35'  
Taurus 25° 10'

### SECOND STEP

- (g) Lagna at 20° N for 21h. 04m. = 25° 36'
- (h) Lagna at 20° N for 21h. 20m. = 29° 51'
- (i) Increase in Lagna for a rise in 16m. S.T. = 4° 15'
- Repeating (d) and (f) increase in Lagna for 14m.

$$\begin{array}{r} 4^{\circ} 15' \times 14 \\ \hline 16 \\ \hline 3^{\circ} 43' \\ \hline \end{array}$$

∴ Lagna at 20° N at 21h. 18m.

$$\begin{array}{r} 29^{\circ} 19' \\ \hline \end{array}$$

### THIRD STEP

(a) Lagna at  $10^{\circ}$  N Lat. S.T. 21h. 18m. = Taurus  $25^{\circ} 20'$

(b) Lagna at  $20^{\circ}$  N.S.T. 21h. 18m. =  $29^{\circ} 19'$

Change in Lagna for change of  $10^{\circ}$  in latitude =  $3^{\circ} 59'$

Change in Lagna for change of  $3^{\circ}$  in latitude

$$= \frac{3^{\circ} 59' \times 3}{10}$$

$$= 1^{\circ} 11'$$

$\therefore$  Lagna at  $13^{\circ}$ , at S.T. 21h. 18m. =  $25^{\circ} 20'$  Taurus

$$+ \frac{1^{\circ} 11'}{26^{\circ} 31' \text{ Taurus}}$$

$26^{\circ} 31'$  Taurus

This is Sayana or tropical. To obtain the Nirayana Lagna (Hindu system) deduct the Ayanamsa for 1951 from the Sayana Lagna.

Sayana Lagna

Taurus

$26^{\circ} 31'$

Ayanamsa for 1951

$21^{\circ} 43' 38''$

$4^{\circ} 47' 22''$  Taurus

Lagna at birth =  $4^{\circ} 47' 22''$  Taurus or Vrishabha

### TENTH HOUSE

The longitude of the 10th house for a given sidereal time is the same for all latitudes. Therefore by simply entering the tenth house column and following the ~~same~~ procedure as given in Step II for ascendant determination, the tenth house longitude can be obtained.

In the example horoscope :

(a) Tenth House longitude (Sayana) for S.T.

21h. 04m. Aquarius  $13^{\circ} 32'$

-do- 21h. 20m. „  $17^{\circ} 33'$

(b) Increase in longitude for a rise

in 16m. S.T. =  $4^{\circ} 1'$

Sidereal Time at birth (21h. 18m.) is ahead of S.T. of (a) by 14 minutes.

Therefore increase in tenth house longitude for 14m. is

$$\frac{4^{\circ}}{16} \times 14 = 3^{\circ} 31'$$

|  |               |
|--|---------------|
| Tenth house longitude at S.T. 21h. 4m. is Aquarius | 13° 33'       |
| Increase in 14m.                                   | <u>3° 31'</u> |

|  |                |
|--|----------------|
| Tenth house longitude at birth (i.e., S.T. |                |
| 21h. 18m.) Aquarius                        | 17° 4'         |
| Less Ayanamsa                              | <u>21° 44'</u> |
| Capricorn                                  | 25° 20'        |

All these calculations can be eliminated and the longitudes of the Ascendant, 10th and other houses can be easily and quickly obtained by reference to *Nirayana Tables of Houses*.

*Another Example*: Let us cast the chart for a future epoch viz., 8-8-1992 at 7-30 p.m. (IST) at Bangalore, Long. 77° 75' (or 5<sup>h</sup> 10<sup>m</sup> 20<sup>s</sup>) E and Lat. 13° N.

The Local Mean Time of birth will be 7<sup>h</sup> 10<sup>m</sup> 20<sup>s</sup> p.m.

The *Ephemeris* is calculated for 5.30 p.m. (IST) or 12 noon (GMT).

This means the positions of planets are correct for 5<sup>h</sup> 10<sup>m</sup> 20<sup>s</sup> (LMT) Bangalore or 4<sup>h</sup> 51<sup>m</sup> 16<sup>s</sup> (LMT) Bombay, or 5<sup>h</sup> 53<sup>m</sup> 24<sup>s</sup> (LMT) Calcutta or 5<sup>h</sup> 21<sup>m</sup> 17<sup>s</sup> p.m. (LMT) Madras or 5<sup>h</sup> 16<sup>m</sup> 48<sup>s</sup> p.m. (LMT) Nagpur or 12<sup>h</sup> 58<sup>m</sup> p.m. (LMT) Berlin and so on.

The positions required are for 7<sup>h</sup> 10<sup>m</sup> 20<sup>s</sup> p.m. (LMT) Bangalore on 8-8-1992:

Position of the Sun :

|                  |             |                 |
|------------------|-------------|-----------------|
| From Ephemeris : | 15th August | 140° 58'        |
|                  | 3rd August  | <u>131° 23'</u> |
|                  |             | = 1 "           |

|                     |         |
|---------------------|---------|
| Motion in 10 days : | 9 35    |
| Motion in 1 day :   | 0 57 30 |
| Motion in 1 hour :  | 0 2 24  |

Ephemeris position on the 3rd August

|                 |           |
|-----------------|-----------|
| (5-30 p.m. IST) | 131 23 00 |
|-----------------|-----------|

|   |                |
|---|----------------|
| For 5 days from 3rd August to 8th August: | <u>4 47 30</u> |
|---|----------------|

|                          |           |
|--------------------------|-----------|
| Position on 8th August : | 136 10 30 |
|--------------------------|-----------|

|                         |               |
|-------------------------|---------------|
| Add motion in 2 hours : | <u>0 4 48</u> |
|-------------------------|---------------|

|  |           |
|--|-----------|
| This is the Sayana or Western position : | 136 15 18 |
|--|-----------|

|                                 |                 |
|---------------------------------|-----------------|
| Deducting the year's Ayanamsa : | <u>22 11 01</u> |
|---------------------------------|-----------------|

|                                  |           |
|----------------------------------|-----------|
| The Hindu or Nirayana position : | 113 57 17 |
|----------------------------------|-----------|

|          |          |
|----------|----------|
| = Cancer | 23 57 17 |
|----------|----------|

**Position of the Moon :**

|                                 |                    |         |
|---------------------------------|--------------------|---------|
| From Ephemeris :                | 9th August         | 274 00  |
|                                 | 7th August         | 249 26  |
| Motion in 2 days :              |                    | 24 34   |
| Motion in 1 day :               |                    | 12 17   |
| Motion in 1 hour :              |                    | 0 30 43 |
| Moon's position on 7th August : |                    | 249 26  |
| Add 1 day's motion :            |                    | 12 17   |
| Moon's position on 8th August   |                    |         |
|                                 | (at 5-30 p.m. IST) | 261 43  |

Since the birth time is at 7h 10m 20s p.m.

LMT (or 7-30 p.m., IST) and the Ephemeris is given for 5h 10m 20s p.m., LMT or 5-30 p.m., IST) add to the above :

Motion for 2 hours : 1 1 26

Moon's position at birth : 262 44 26

This is the Sayana or Western position.

Deduct the year's Ayanamsa to get the

Nirayana or the Hindu position.

Sayana position : 262 44 26

Less Ayanamsa : 22 18 1

The Moon's Nirayana position 240 26 25

= Sagittarius 0 26

**Nakshatra**

Reference to the Table of Nakshatras (Table IV) reveals that upto 253° 20' (i.e., Sagittarius 13° 20'), the constellation Moola prevails.

|  |               |
|--|---------------|
| In this example the Moon is in Sagittarius | 0 26          |
| =  | 8s 26         |
| =  | 240 26        |
| =  | 14426'        |
| Dividing the Moon's position               | 14426'        |
| in minutes by 800                          | =             |
|  | 800           |
|  | = Quotient 18 |
|  | Remainder 26' |

The ruling star is the 19th, *i.e.*, Moola. 26' have been covered in this star and the balance to be covered is  $(800 - 26') = 774' = A$ .

Corresponding to this balance A, the period of the planet (*i.e.*, the lord of the ruling star, *viz.*, Ketu) remaining at the time of birth can be ascertained thus (See Table IV) :

A × Dasa Duration of lord of the ruling Star

800

In this ~~case~~ the lord of the ruling star being Ketu and his Dasa period being 7 years, the period remaining at the time of the epoch will be  $\frac{774 \times 7}{800} = 6 \text{ years, } 9 \text{ months and } 8 \text{ days.}$

Reference to Table V gives the ruling Dasa and the balance on the basis of the Moon's position. The Moon here is in Sagittarius  $0^\circ 26''$ . For this, Table IV gives the balance of Ketu Dasa 6 years, 9 months and 8 days.

### Tithi (Lunar Day)

To know the *tithi* ruling on 8-8-1992 at the epoch time : First we deduct the longitude of the Sun ( $113^\circ 57'$  or  $6827'$ ) from that of the Moon ( $240^\circ 26'$  or  $14426'$ ). The remainder is  $126^\circ 29'$  ( $7589'$ ). It is less than  $180^\circ$  and hence it is the bright half (Sukla Paksha). Dividing the balance, *viz.*,  $126^\circ 29'$  by 12, the quotient is 10 and remainder  $6^\circ 29'$ . The lunar day is the 11th day of the bright half (Sukla Ekadasi),  $6^\circ 29'$  or  $389'$  of its portion having been traversed,  $5^\circ 31'$  or  $331'$  of arc is yet to be traversed. If the remainder  $5^\circ 31'$  is multiplied by 24 and divided by the difference of the daily motions of the Sun and the Moon, we get the number of hours (from the time of the birth or epoch) still covering the *tithi* in question.

The daily motion of the Moon on the

day of epoch is

$12^\circ 17'$

The daily motion of the Sun is

$0^\circ 56'$

Difference :

$11^\circ 19'$

=  $679'$ .

Multiplying  $5^\circ 31'$  ( $331'$ ) by 24 and dividing the product by 679 we get  $\frac{331 \times 24}{679} = 11\text{h } 41\text{m } 24\text{s.}$



which added to the time of epoch gives (7h 30m p.m. + 11h 41m 24s) 7h 11m 24s a.m. (IST) on 9th August which will be the ending moment of the 11th lunar day.

### Yoga

In our example the sum of the Sun's and the Moon's longitudes is  $354^{\circ} 23'$ . According to Table V Vaidhruti Yoga commences at  $346^{\circ} 40'$  and extends till  $360^{\circ}$ . Since the combined longitude of the Sun and the Moon is  $354^{\circ} 23'$ , the Yoga at the epoch time is Vaidruti.

#### Position of Mars :

|                                   |                       |
|-----------------------------------|-----------------------|
| August 13th                       | $71^{\circ} 47'$      |
| August 3rd                        | $65^{\circ} 12'$      |
| Motion in 10 days                 | $6^{\circ} 35'$       |
| Motion in 1 day                   | $0^{\circ} 39' 30''$  |
| Motion in 1 hour                  | $0^{\circ} 1' 39''$   |
| Position on 3rd August            | $65^{\circ} 12' 00''$ |
| For 5 days from 3rd to 8th August | $3^{\circ} 17' 30''$  |
| Position on 8th August            | $68^{\circ} 29' 30''$ |
| Add motion in 2 hours             | $0^{\circ} 3' 18''$   |
| Sayana position at epoch          | $68^{\circ} 32' 48''$ |
| Deduct Ayanamsa for the year      | $22^{\circ} 18' 01''$ |
|                                   | $46^{\circ} 14' 47''$ |
| * = Taurus                        | $16^{\circ} 14' 47''$ |
|                                   | $16^{\circ} 14' 47''$ |

#### Position of \*Mercury :

|                      |                     |
|----------------------|---------------------|
| August 3rd           | $130^{\circ} 18'$   |
| August 8th           | $127^{\circ} 08'$   |
| (R) Motion in 5 days | $3^{\circ} 10'$     |
| (R) Motion in 1 day  | $0^{\circ} 38'$     |
| (R) Motion in 1 hour | $0^{\circ} 1' 35''$ |

\* Mercury's position is given for every 5 days. The birth is on 8th August and the position of Mercury is given in the Ephemeris for this date; hence it can be taken as it is. The motion for 2 hours is to be deducted as Mercury is retrograde.

|                               |              |
|-------------------------------|--------------|
| Position on 8th August        | 127° 48' 00" |
| Deduct (R) Motion for 2 hours | 0° 03' 10"   |
| Sayana position               | 127° 04' 50" |
| Less Ayanamsa :               | 22° 18' 01"  |
| Nirayana Position             | 104° 46' 49" |
| - Cancer                      | 14° 46' 49"  |

**Position of Jupiter :**

|                                   |              |
|-----------------------------------|--------------|
| August 13th                       | 167° 37' 00" |
| August 3rd                        | 165° 28' 00" |
| Motion in 10 days                 | 1° 59' 00"   |
| Motion in 1 day                   | 0° 11' 54"   |
| Motion in 1 hour                  | 0° 0' 5"     |
| Position on 3rd August            | 165° 38' 00" |
| For 5 days from 3rd to 8th August | 0° 59' 30"   |
| Position on 8th August            | 166° 37' 30" |
| Add Motion for 2 hours            | 0° 0' 10"    |
| Sayana position at epoch          | 166° 37' 40" |
| Less Ayanamsa                     | 22° 18' 01"  |
| Nirayana position                 | 144° 19' 39" |
| - Leo                             | 24° 19' 39"  |

**Position of Venus :**

|                                   |              |
|-----------------------------------|--------------|
| August 13th                       | 157° 40'     |
| August 3rd                        | 145° 22'     |
| Motion in 10 days                 | 12° 18'      |
| Motion in day                     | 1° 13' 48"   |
| Motion in 1 hour                  | 0° 3' 4".5   |
| Position on 3rd August            | 145° 22' 00" |
| For 5 days from 3rd to 8th August | 6° 09' 00"   |
| Position on 8th August            | 151° 03' 00" |
| Add Motion for 2 hours            | 0° 06' 09"   |
| Sayana position at epoch          | 151° 37' 09" |
| Less Ayanamsa                     | 22° 18' 01"  |
| Nirayana Position                 | 129° 19' 08" |
| = Leo                             | 9° 19' 8"    |

**Position of \*Saturn :**

|  |             |              |
|--|-------------|--------------|
|  | August 3rd  | 315° 25'     |
|  | August 13th | 314° 40'     |
| (R) Motion in 10 days                                  |             | 0° 45'       |
| (R) Motion in 1 day                                    |             | 0° 4' 30"    |
| (R) Motion for 1 hour                                  |             | 0° 0' 11"    |
| Position on 3rd August                                 |             | 315° 25' 00" |
| Deduct (R) Motion for 5 days<br>from 3rd to 8th August |             | 0° 22' 30"   |
| Position on 8th August                                 |             | 315° 2' 30"  |
| Deduct Motion for 2 hours                              |             | 0° 0' 22"    |
| Sayana position at epoch                               |             | 315° 2' 8"   |
| Less Ayanamsa  |             | 22° 18' 1"   |
| Nirayana position                                      |             | 282° 44' 7"  |
|  | Capricorn   | 22° 44' 7"   |

**Position of \*\*Rahu :**

|                                |               |                |
|--------------------------------|---------------|----------------|
|                                | August 3rd    | 268° 23' 00"   |
|                                | August 13th   | 267° 52' 00"   |
| (R) Motion in 10 days          |               | 0° 35' 00"     |
| (R) Motion in 1 day            |               | 0° 3' 30"      |
| (R) Motion in hour             |               | 0° 0' 8".75    |
| Position of Rahu on 3rd August |               | 268° 23' 00"   |
| Deduct Motion for 5 days       |               | 0 17' 30"      |
| Position of Rahu on 8th August |               | 268° 5' 30"    |
| Deduct Motion for 2 hours      |               | 0° 0' 17".5    |
| Sayana position at epoch       |               | 268° 5' 12".5  |
| Less Ayanamsa                  |               | 22° 18' 1"     |
| Nirayana position              |               | 245° 47' 11".5 |
|                                | = Sagittarius | 5° 47' 11".5   |

**Position of Uranus :**

|                       |              |
|-----------------------|--------------|
| Position on 1-8-1992  | 285° 04' 00" |
| Position on 1-9-1992  | 284° 14' 00" |
| (R) Motion in 30 days | 0° 50' 00"   |
| (R) Motion in 1 day   | 0° 1' 4"     |

■ Saturn is retrograde and hence its motion is negative.

■ Rahu's motion is always backward. Add 180° to Rahu's position to get Ketu's position.

Position of Uranus on 1-8-1992

Deduct (R) Motion for 8 days

Position on 8th August

Deduct (R) Motion for 2 hours

Sayana position of Uranus

Less Ayanamsa

Nirayana position

285° 04' 00"

0° 13' 20"

284° 51' 40"

0° 0' 8"

284° 51' 32"

22° 18' 1"

262° 33' 31"

22° 31' 31"

= Sagittarius

Position of Neptune :

Position on 1-8-1992

Position on 1-9-1992

(R) Motion in 30 days

(R) Motion in 1 day

(R) Motion in 1 hour

Position on 1-8-1982

Deduct for 8 days

Position on 8th August

Deduct Motion for 2 hours

Sayana position at epoch

Deduct Ayanamsa

Nirayana position

286° 58' 00"

286° 22' 00"

0° 36' 00"

0° 1' 12"

0° 0' 3"

286° 58' 00"

0° 9' 54'

286° 48' 6"

0° 0' 6"

286° 48' 0"

22° 18' 01"

246° 29' 59"

6° 29' 59"

= Sagittarius

Position of Pluto :

Position on 1-9-1992

Position on 1-8-1992

Motion in 30 days

Motion in 1 day

Motion in 1 hour

Position of Pluto on 1-8-1992

Add Motion for 8 days

Sayana position on 8th August

Deduct Ayanamsa

Nirayana Position

230° 27' 00"

230° 09' 00"

0° 18' 00"

0° 0' 36"

0° 0' 1".5

230° 09' 00"

0° 04' 48"

230° 13' 48"

22° 18' 01"

207° 55' 47"

27° 55' 47"

= Libra

## THE SIDEREAL TIME

The required Sidereal Time =  $Y + D \pm I \pm K \pm C$ .

In the example chart, the time given is 7-30 p.m. I.S.T. equivalent to 7<sup>h</sup> 10<sup>m</sup> 20<sup>s</sup> L.M.T. on 8-8-1992 A.D.

The Sidereal Time of the epoch will be

$$Y = 18^h 40^m 41^s$$

$$D = 14 \quad 23 \quad 26$$

$$I = 7 \quad 10 \quad 80$$

$$K = 0 \quad 1 \quad 10$$

---


$$40 \quad 15 \quad 37$$

Expunging multiples of 24 from this, we get the Sidereal Time ■■ 16<sup>h</sup> 15<sup>m</sup> 37<sup>s</sup> or 16<sup>h</sup> 16<sup>m</sup>. When the Sidereal Time is known, the longitudes of the ascendant and other houses ■■■ be easily ascertained with the aid of any standard. \*Tables of Houses or preferably from our own book *The Nirayana Tables of Houses* for 0° 60° N. Lat.

For the Sidereal Time of the epoch, *vi.*, 16<sup>h</sup> 15<sup>m</sup> 37<sup>s</sup> the ascendant and the other houses are as follows :

|            |             | °  | '  |
|------------|-------------|----|----|
| Ascendant  | Aquarius    | 7  | 14 |
| 2nd house  | Pisces      | 9  | 30 |
| 3rd house  | Aries       | 11 | 46 |
| 4th house  | Taurus      | 14 | 02 |
| 5th house  | Gemini      | 11 | 46 |
| 6th house  | Cancer      | 9  | 30 |
| 7th house  | Leo         | 7  | 14 |
| 8th house  | Virgo       | 9  | 30 |
| 9th house  | Libra       | 11 | 06 |
| 10th house | Scorpio     | 14 | 02 |
| 11th house | Sagittarius | 11 | 46 |
| 12th house | Capricorn   | 9  | 30 |

\* Most Tables of Houses are given ■■ on the basis of Sayana (or Tropical). Therefore from the longitudes of the ascendant, etc., obtained from such a Table of Houses, the Ayanamsa for the year in question should be deducted. *Nirayana Tables of Houses*, published by Raman Publications, gives the correct Hindu or sidereal longitudes of the ascendant, etc.

The Rasi Kundali (zodiacal diagram) in respect of the epoch, viz., 8-8-1992 at 7-30 p.m. (I.S.T.) will be

|                       |      |                    |                      |
|-----------------------|------|--------------------|----------------------|
|                       |      | Mars<br>16°14'47"  | Ketu<br>5°47'11"     |
| Ascdt.<br>7° 14'      | RASI |                    | Sun<br>22°47'17"     |
| Saturn<br>22° 4' 7"   |      |                    | Merc.<br>14°46'49"   |
|                       |      |                    | Jupiter<br>24°19'13" |
|                       |      |                    | Venus<br>9° 18' 8"   |
| Moon<br>0° 26'        |      | Pluto<br>27°55'47" |                      |
| Neptune<br>6° 29' 50" |      |                    |                      |
| Rahu<br>5°47' 11"     |      |                    |                      |
| Uranus<br>22°33'31"   |      |                    |                      |

# Retrogression Tables of Planets

| Planet | Venus                  | Mars                    | Jupiter               | Saturn                 | Neptune              | Uranus                 | Pluto                |
|--------|------------------------|-------------------------|-----------------------|------------------------|----------------------|------------------------|----------------------|
| Year   | ♀                      | ♂                       | ♃                     | ♄                      | ♅                    | ♆                      | P                    |
| 1889   | 13 Nov R<br>24 Dec D   | 24 April R<br>5 July D  | 2 June R<br>29 Sep D  | 29 April D<br>29 Dec R | 13 Feb D<br>13 Sep R | 11 Feb R<br>4 July D   | 11 Feb D<br>6 Sep R  |
| 1891   |                        |                         | 10 July R<br>4 Nov D  | 13 May D               | 16 Feb D<br>11 Sep R | 11 Feb R<br>9 July D   | 13 Feb D<br>11 Sep R |
| 1892   | 23 June R<br>11 July D | 6 July R<br>3 Sep D     | 14 Aug R<br>10 Dec D  | 10 Jan R<br>27 May D   | 17 Feb D<br>13 Sep R | 10 Feb R<br>10 July D  | 11 Feb D<br>11 Sep R |
| 1893   |                        |                         | 21 Sep R              | 11 Jan R<br>10 June D  | 17 Feb D<br>16 Sep R | 16 Feb R<br>16 July D  | 14 Feb D<br>9 Sep R  |
| 1894   | 27 Jan R<br>10 Mar D   | 16 Sep R<br>22 Nov D    | 17 Jan D<br>26 Oct R  | 11 Feb R<br>23 June D  | 20 Feb D<br>11 Sep R | 19 Feb R<br>21 July D  | 16 Feb D<br>10 Sep R |
| 1895   | 30 Aug R<br>11 Oct D   |                         | 21 Feb D<br>27 Nov R  | 16 Feb R<br>6 July D   | 22 Feb D<br>22 Sep R | 24 Feb R<br>11 July D  | 16 Feb D<br>11 Sep R |
| 1896   |                        | 11 Nov R                | 25 Mar D<br>27 Dec R  | 28 Feb R<br>17 July D  | 26 Feb D<br>11 Sep R | 2 Mar R<br>1 Aug D     | 17 Feb D<br>12 Sep R |
| 1897   | 8 April R<br>21 May D  | 17 Jan D                | 27 April D            | 13 Mar R<br>29 July D  | 27 Feb D<br>26 Sep R | 11 Mar R<br>5 Aug D    | 11 Feb D<br>11 Sep R |
| 1898   | 12 Nov R<br>11 Dec D   | 11 Dec R                | 25 Jan R<br>29 May D  | 11 Mar R<br>11 Aug D   | 1 Mar D<br>29 Sep R  | 10 Mar R<br>9 Aug D    | 11 Feb D<br>14 Sep R |
| 1899   |                        |                         | 26 Feb R<br>28 Feb D  | 4 April R<br>23 Aug D  | 6 Mar D<br>2 Oct R   | 14 Mar R<br>13 Aug D   | 21 Feb D<br>16 Sep R |
| 1900   | 17 June R<br>30 July D |                         | 29 Mar R<br>30 July D | 11 April R<br>4 Sep D  | 6 Mar D<br>2 Oct R   | 18 Mar R<br>19 Aug D   | 22 Feb D<br>17 Sep R |
| 1901   |                        | 14 Jan R<br>5 April D   | 2 May R<br>31 Aug D   | 26 April R<br>12 Sep D | 8 Mar D<br>5 Oct R   | 23 Mar R<br>23 Aug D   | 22 Feb D<br>18 Sep R |
| 1902   | 11 Jan R<br>8 Mar D    |                         | 7 June R<br>11 Oct D  | 9 May R<br>27 Sep D    | 11 Mar D<br>9 Oct R  | 28 Mar R<br>28 Aug D   | 24 Feb D<br>11 Sep R |
| 1903   | 11 Aug R<br>10 Oct D   | 19 Feb R<br>10 May D    | 15 July R<br>10 Nov D | 21 May R<br>9 Oct D    | 14 Mar D<br>12 Oct R | 11 April R<br>2 Sep D  | 26 Feb D<br>21 Sep R |
| 1904   |                        |                         | 21 Aug R<br>16 Dec D  | 2 June R<br>20 Oct D   | 15 Mar D<br>12 Oct R | 11 April R<br>11 Sep D | 26 Feb D<br>21 Sep R |
| 1905   | 7 April R<br>19 May D  | 11 April R<br>18 June D | 26 Sep R              | 14 June R<br>11 Nov D  | 17 Mar D<br>15 Oct R | 9 April R<br>10 Sep D  | 27 Feb D<br>22 Sep R |



| Planet<br>Year | Venus<br>♀             | Mars<br>♂             | Jupiter<br>♃          | Saturn<br>♄            | Neptune<br>♆           | Uranus<br>♅            | Pluto<br>♇           |
|----------------|------------------------|-----------------------|-----------------------|------------------------|------------------------|------------------------|----------------------|
| 1906           | 11 Nov R<br>10 Dec D   |                       | 22 Jan D<br>30 Oct R  | 27 June R<br>13 Nov D  | 20 Mar D<br>17 Oct R   | 14 April R<br>15 Sep D | 1 Mar D<br>24 Sep R  |
| 1907           |                        | 6 June R<br>10 Aug D  | 24 Feb D<br>2 Dec R   | 24 July R<br>26 Nov D  | 22 Mar D<br>1 Nov R    | 18 April R<br>11 Sep D | 8 Mar D<br>25 Sep R  |
| 1908           | 15 June R<br>28 July D |                       | 31 Mar D<br>11 Dec R  | 23 July R<br>1 Dec D   | 24 Mar D<br>21 Oct R   | 22 April R<br>22 Sep D | 2 Mar D<br>25 Sep R  |
| 1909           |                        | 11 Aug R<br>24 Oct D  | 2 May D               | 6 Aug R<br>20 Dec D    | 26 Mar D<br>24 Oct R   | 26 April R<br>28 Sep D | 4 Mar D<br>27 Sep R  |
| 1910           | 5 Mar D<br>1 Jan R     |                       | 2 Feb R<br>3 June D   | 20 Aug R               | 29 Mar D<br>26 Oct R   | 1 May R<br>3 Oct D     | 1 Mar D<br>28 Sep R  |
| 1911           | 11 Aug R<br>7 Oct D    | 19 Oct R<br>30 Dec D  | 2 Mar R<br>3 July D   | 3 Jan D<br>3 Sep R     | 31 Mar D<br>28 Oct R   | 1 May R<br>6 Oct D     | 6 Mar D<br>29 Sep R  |
| 1912           |                        |                       | 1 April R<br>1 Aug D  | 16 Jan D<br>17 Sep R   | 2 April D<br>30 Oct R  | 8 May R<br>10 Oct D    | 7 Mar D<br>30 Sep R  |
| 1913           | 1 April R<br>16 May D  | 27 Nov R              | 6 May R<br>1 Sep D    | 29 Jan D<br>2 Oct R    | 1 April D<br>2 Nov R   | 13 May R<br>14 Oct D   | 8 Mar D<br>1 Oct R   |
| 1914           | 1 Nov R<br>18 Dec D    | 13 Feb D              | 12 June R<br>10 Oct D | 12 Feb D<br>16 Oct R   | 7 April R<br>1 Nov R   | 18 May R<br>19 Oct D   | 1 Mar D<br>2 Oct R   |
| 1915           |                        |                       | 1 July R<br>15 Nov D  | 27 Feb D<br>30 Oct R   | 10 April D<br>6 Nov R  | 21 May R<br>23 Oct D   | 11 Mar D<br>1 Oct R  |
| 1916           | 12 June R<br>25 July D | 1 Jan R<br>22 Mar D   | 1 Aug R<br>21 Dec D   | 12 Mar D<br>12 Nov R   | 10 April D<br>7 Nov R  | 25 May R<br>28 Oct D   | 11 Mar D<br>4 Oct R  |
| 1917           |                        |                       | 1 Oct R               | 26 Mar D<br>26 Nov R   | 13 April D<br>10 Nov R | 29 May R<br>30 Oct D   | 11 Mar D<br>1 Oct R  |
| 1918           | 21 Jan R<br>3 Mar D    | 1 Feb R<br>24 April D | 27 Jan D<br>1 Nov R   | 9 April D<br>10 Dec R  | 15 April D<br>12 Nov R | 1 June R<br>4 Nov D    | 14 Mar D<br>7 Oct R  |
| 1919           | 23 Aug R<br>4 Oct D    |                       | 1 Mar D<br>1 Dec R    | 24 April D<br>23 Dec R | 18 April D<br>15 Nov R | 7 June R<br>1 Nov D    | 14 Mar D<br>7 Oct R  |
| 1920           |                        | 15 Mar R<br>1 June D  | 4 April D             | 7 May D                | 19 April D<br>10 Nov R | 10 June R<br>11 Nov D  | 15 Mar D<br>1 Oct R  |
| 1921           | 2 April R<br>14 May D  |                       | 1 Jan R<br>6 May D    | 1 Jan R<br>21 May D    | 22 April D<br>19 Nov R | 14 June R<br>15 Nov D  | 17 Mar D<br>10 Oct R |
| 1922           | 1 Nov R<br>16 Dec D    | 8 May R<br>17 July D  | 3 Feb R<br>6 June D   | 17 Jan R<br>1 June D   | 24 April D<br>21 Nov R | 19 June R<br>20 Nov D  | 19 Mar D<br>12 Oct R |
| 1923           |                        |                       | 6 Mar R<br>7 July D   | 30 Jan R<br>17 June D  | 27 April D<br>24 Nov R | 23 June R<br>24 Nov D  | 20 Mar D<br>13 Oct R |
| 1924           | 10 June R<br>1 July D  | 24 July R<br>21 Sep D | 6 April R<br>7 Aug D  | 11 Feb R<br>29 June D  | 23 April D<br>25 Nov R | 11 June R<br>27 Nov D  | 21 Mar D<br>14 Oct R |

| Planet | Venus<br>♀            | Mars<br>♂               | Jupiter<br>♃           | Saturn<br>♄            | Neptune<br>♆          | Uranus<br>♅           | Pluto<br>♇             |
|--------|-----------------------|-------------------------|------------------------|------------------------|-----------------------|-----------------------|------------------------|
| Year   |                       |                         |                        |                        |                       |                       |                        |
| 1925   |                       |                         | 11 May R<br>9 Sep D    | 22 Feb R<br>12 July D  | 8 May D<br>27 Nov R   | 2 July R<br>11 Dec D  | 22 Mar D<br>16 Oct R   |
| 1926   | 18 Jan R<br>28 Feb D  | 29 Sep R<br>7 Dec D     | 16 June R<br>14 Oct D  | 6 Mar R<br>24 July D   | 3 May D<br>30 Nov R   | 11 July R<br>6 Dec D  | 24 Mar D<br>17 Oct R   |
| 1927   | 20 Aug R<br>8 Oct D   |                         | 25 July R<br>22 Nov D  | 18 Mar D<br>11 Aug D   | 6 May D<br>11 Dec R   | 9 July R<br>10 Dec D  | 25 Mar D<br>18 Oct R   |
| 1928   |                       | 12 Nov R                | 24 Aug R<br>28 Dec D   | 29 Mar R<br>17 Aug D   | 7 May D<br>4 Dec R    | 13 July R<br>13 Dec D | 26 Mar R<br>19 Oct D   |
| 1929   | 30 Mar R<br>12 May D  | 27 Jan D                | 5 Oct R                | 10 April R<br>22 Aug D | 10 May D<br>6 Dec R   | 17 July R<br>17 Dec D | 27 Mar R<br>20 Oct D   |
| 1930   | 2 Nov R<br>13 Dec D   | 19 Dec R                | 11 Jan D<br>11 Nov R   | 11 April R<br>10 Sep D | 11 May D<br>9 Dec R   | 22 July R<br>21 Dec D | 29 Mar D<br>22 Oct R   |
| 1931   |                       | 9 Mar D                 | 7 Mar D<br>10 Dec R    | 4 May R<br>22 Sep D    | 15 May D<br>11 Dec R  | 22 July R<br>11 Dec D | 31 Mar D<br>24 Oct R   |
| 1932   | 8 June R<br>21 July D |                         | 9 April D              | 15 May R<br>3 Oct D    | 17 May D<br>13 Dec R  | 29 July R<br>29 Dec D | 31 Mar D<br>24 Oct R   |
| 1933   |                       | 21 Jan R<br>18 April D  | 8 Jun R<br>10 May D    | 27 May R<br>15 Oct D   | 20 May D<br>18 Dec R  | 1 Aug R               | 2 April D<br>22 Oct R  |
| 1934   | 16 Jan R<br>11 Feb D  |                         | 7 Feb R<br>11 June D   | 9 June R<br>22 Oct D   | 11 May D<br>18 Dec R  | 3 Jan D<br>7 Aug R    | 4 April D<br>22 Oct R  |
| 1935   | 18 Aug R<br>28 Sep D  | 27 Feb R<br>11 May D    | 10 Mar R<br>12 July D  | 23 June R<br>8 Nov D   | 11 May D<br>21 Dec R  | 7 Jan D<br>11 Aug R   | 5 April D<br>29 Oct R  |
| 1936   |                       |                         | 11 April R<br>12 Aug D | 1 July R<br>19 Nov D   | 25 May D<br>11 Dec R  | 11 Jan D<br>16 Aug R  | 7 April D<br>31 Mar R  |
| 1937   | 11 Mar R<br>9 May D   | 15 April R<br>27 June D | 16 May R<br>14 Sep D   | 17 July R<br>2 Dec D   | 29 May D<br>24 Dec R  | 14 Jan D<br>19 Aug R  | 9 April D<br>2 Nov R   |
| 1938   | 31 Oct R<br>11 Dec D  |                         | 21 June R<br>19 Oct D  | 31 July R<br>15 Dec D  | 30 May D<br>26 Dec R  | 18 Jan D<br>24 Aug R  | 11 April D<br>1 Nov R  |
| 1939   |                       | 23 June R<br>24 Aug D   | 30 July R<br>22 Nov D  | 14 Aug R<br>29 Dec D   | 11 June D<br>28 Dec R | 22 Jan D<br>29 Aug R  | 13 April D<br>6 Nov R  |
| 1940   | 5 June R<br>19 July D |                         | 5 Sep R                | 23 Aug R               | 3 June D<br>30 Dec R  | 27 Jan D<br>2 Sep R   | 14 April D<br>6 Nov R  |
| 1941   |                       | 7 Sep R<br>10 Nov D     | 2 Jan D<br>10 Oct R    | 9 Jan D<br>12 Sep R    | 8 Jun D               | 30 Jan D<br>6 Sep R   | 14 April D<br>8 Nov R  |
| 1942   | 13 Jan R<br>23 Feb D  |                         | 5 Feb D<br>13 Nov R    | 23 Jan D<br>25 Sep R   | 2 Jan R<br>8 June D   | 4 Feb D<br>10 Sep R   | 16 April D<br>8 Nov R  |
| 1943   | 16 Aug R<br>27 Sep D  | 22 Oct R                | 12 Mar D<br>14 Dec R   | 11 Feb D<br>10 Oct R   | 5 Jan R<br>11 June D  | 8 Feb D<br>18 Sep R   | 17 April D<br>10 Nov R |

| Planet<br>Year | Venus<br>♀            | Mars<br>♂             | Jupiter<br>♃           | Saturn<br>♄            | Neptune<br>♆          | Uranus<br>♅            | Pluto<br>♇             |
|----------------|-----------------------|-----------------------|------------------------|------------------------|-----------------------|------------------------|------------------------|
| 1944           |                       | 10 Jan D              | 11 April D             | 23 Feb D<br>23 Oct R   | 7 Jan R<br>13 June D  | 11 Feb D<br>19 Sep R   | 11 April D<br>11 Nov R |
| 1945           | 11 Mar R<br>7 May D   | 5 Dec R               | 11 Jan R<br>15 May D   | 6 Mar D<br>7 Nov R     | 8 Jan R<br>15 June D  | 11 Feb D<br>23 Sep R   | 20 April D<br>12 Nov R |
| 1946           | 28 Oct R<br>8 Dec D   | 22 Feb D              | 11 Feb R<br>10 June D  | 20 Mar D<br>11 Nov R   | 10 Jan R<br>17 June D | 21 Feb D<br>28 Sep R   | 21 April R<br>14 Nov R |
| 1947           |                       |                       | 14 Mar R<br>15 July D  | 4 April D<br>4 Dec R   | 13 Jan R<br>20 June D | 25 Feb D<br>3 Oct R    | 22 April D<br>16 Nov R |
| 1948           | 1 June R<br>16 July D | 9 Jan R<br>20 Mar D   | 15 April R<br>16 Aug D | 17 April D<br>17 Dec R | 15 Jan R<br>21 June D | 1 Mar D<br>6 Oct R     | 24 April D<br>17 Nov R |
| 1949           |                       |                       | 21 May R<br>20 Sep D   | 2 May D<br>30 Dec R    | 17 Jan R<br>24 June D | 5 Mar D<br>11 Oct R    | 21 April D<br>19 Nov R |
| 1950           | 11 Jan R<br>22 Feb D  | 13 Feb R<br>5 May D   | 21 June R<br>26 Oct D  | 11 May D               | 19 Jan R<br>27 June D | 10 Mar D<br>16 Oct R   | 28 April D<br>21 Nov R |
| 1951           | 14 Aug R<br>20 Sep D  |                       | 4 Aug R<br>20 Nov D    | 12 Jan R<br>29 May D   | 21 Jan R<br>28 June D | 15 Mar D<br>22 Oct R   | 20 April D<br>23 Nov R |
| 1952           |                       | 26 Mar R<br>11 June D | 10 Sep R               | 27 Jan R<br>12 June D  | 23 Jan R<br>1 July D  | 18 Mar D<br>26 Oct R   | 1 May D<br>24 Nov R    |
| 1953           | 24 Mar R<br>1 May D   |                       | 6 Jan D<br>15 Oct R    | 1 Feb R<br>25 June D   | 25 Jan R<br>3 July D  | 24 May D<br>30 Oct R   | 2 May D<br>26 Nov R    |
| 1954           | 27 Oct R<br>7 Dec D   | 21 May R<br>29 July D | 11 Feb D<br>18 Nov R   | 17 Feb R<br>8 July D   | 27 Jan R<br>5 July D  | 29 Mar D<br>1 Nov R    | 1 May D<br>28 Nov R    |
| 1955           |                       |                       | 18 Mar D<br>18 Dec R   | 28 Feb R<br>19 July D  | 29 Jan R<br>7 July D  | 2 April D<br>9 Nov R   | 6 May D<br>30 Nov R    |
| 1956           | 2 June R<br>15 July D | 10 Aug R<br>9 Oct D   | 18 April D             | 15 Mar R<br>31 July D  | 31 Jan R<br>9 July D  | 1 April D<br>13 Nov R  | 7 May D<br>1 Dec R     |
| 1957           |                       |                       | 17 Jan R<br>20 May D   | 24 Mar R<br>13 Aug D   | 2 Feb R<br>11 July D  | 11 April D<br>18 Nov R | 9 May D<br>1 Dec R     |
| 1958           | 9 Jan R<br>20 Feb D   | 11 Oct R<br>21 Dec D  | 17 Feb R<br>20 June D  | 6 April R<br>20 Aug D  | 4 Feb R<br>13 July D  | 17 April D<br>24 Nov R | 11 May D<br>5 Dec R    |
| 1959           | 12 Aug R<br>24 Sep D  |                       | 18 Mar R<br>11 July D  | 17 April R<br>6 Sep D  | 6 Feb R<br>13 July D  | 21 April D<br>28 Nov R | 13 May D<br>7 Dec R    |
| 1960           |                       | 21 Nov R              | 21 April R<br>21 Aug D | 28 April R<br>17 Dec D | 8 Feb R<br>17 July D  | 22 April D<br>1 Dec R  | 15 May D<br>9 Dec R    |
| 1961           | 22 Mar R<br>8 May D   | 6 Feb D               | 26 May R<br>24 Sep D   | 11 May R<br>29 Sep D   | 10 Feb R<br>19 July D | 4 May D<br>8 Dec R     | 17 May D<br>11 Dec R   |
| 1962           | 25 Oct R<br>5 Dec D   | 27 Dec R              | 4 July R<br>11 Oct D   | 11 May R<br>11 Oct D   | 11 Feb R<br>11 July D | 1 May D<br>14 Dec R    | 19 May D<br>11 Dec R   |

| Planet | Venus ♀                | Mars ♂                 | Jupiter ♃             | Saturn ♄               | Neptune ♆             | Uranus ♅              | Pluto ♇               |
|--------|------------------------|------------------------|-----------------------|------------------------|-----------------------|-----------------------|-----------------------|
| 1963   |                        | 15 Mar D               | 9 Aug R<br>■ Dec D    | 4 June R<br>22 Oct D   | 14 Feb R<br>23 July D | 9 May D<br>17 Dec R   | 22 May D<br>■ Dec R   |
| 1964   | 31 May R<br>13 July D  |                        | 16 Sep R              | 14 June R<br>■ Nov D   | 16 Feb R<br>25 July D | 14 May D<br>21 Dec R  | 23 May D<br>17 Dec R  |
| 1965   |                        | 30 Jan R<br>20 April D | 11 Jan D<br>20 Oct R  | 29 June R<br>15 Nov D  | 18 Feb R<br>27 July D | 20 May D<br>26 Dec R  | 25 May D<br>19 Dec R  |
| 1966   | 7 Jan R<br>18 Feb D    |                        | 16 Feb D<br>22 Nov R  | 12 July R<br>28 Nov D  | 20 Feb R<br>29 July D | 25 May D              | 28 May D<br>22 Dec R  |
| 1967   | 10 Aug R<br>22 Sep D   | 8 Mar R<br>25 May D    | 21 Mar D<br>23 Dec R  | 25 July R<br>9 Dec D   | 21 Feb R<br>28 July D | 1 Jan R<br>30 May D   | 30 May D<br>■ Dec R   |
| 1968   |                        |                        | 22 April D            | 8 Aug R<br>22 Dec D    | 22 Feb R<br>29 July D | 5 Jan R<br>3 June D   | 2 June D<br>■ Dec R   |
| 1969   | 20 Mar R<br>1 May D    | 27 April R<br>8 July D | 21 Jan R<br>25 May D  |                        | 24 Feb R<br>30 July D | 10 Jan R<br>9 June D  | 5 June D<br>29 Dec R  |
| 1970   | 23 Oct R<br>3 Dec D    |                        | 20 Feb R<br>25 June D | 6 Jan D<br>5 Sep R     | 25 Feb R<br>1 Aug D   | 16 Jan R<br>14 June D | 7 June D<br>31 Dec R  |
| 1971   |                        | 9 July R<br>6 Sep D    | 23 Mar R<br>25 July ■ | 18 Jan D<br>19 Sep R   | 27 Feb R<br>8 Aug D   | 20 Jan R<br>20 June D | 3 Jan R<br>10 June D  |
| 1972   | ■ May R<br>11 July D   |                        | 26 April R<br>■ Aug D | 31 Jan D<br>■ Oct R    | 1 Mar R<br>5 Aug D    | 25 Jan R<br>22 June D | 4 Jan R<br>11 June D  |
| 1973   |                        | 29 Sep R<br>25 Nov D   | 1 June R<br>29 Sep D  | 14 Feb D<br>18 Oct R   | 3 Mar R<br>7 Aug D    | ■ Jan R<br>29 June D  | 7 Jan R<br>14 June D  |
| 1974   | 5 Jan R<br>16 Feb D    |                        | 10 July R<br>■ Nov D  | 1 Mar D<br>1 Nov R     | 5 Mar R<br>9 Aug D    | 3 Feb R<br>6 July D   | 10 Jan R<br>17 June D |
| 1975   | 8 Aug R<br>20 Sep D    | 5 Nov R                | 14 Aug R<br>10 Dec D  | 14 Mar D<br>14 Nov R   | 8 Mar R<br>13 Aug D   | ■ Feb R<br>11 July D  | 12 Jan R<br>19 June D |
| 1976   |                        | 20 Jan D               | 21 Sep R              | 28 Mar D<br>28 Nov R   | 11 Mar R<br>15 Aug D  | 12 Feb R<br>12 July D | 14 Jan R<br>21 June D |
| 1977   | 18 Mar R<br>29 April D | 14 Dec R               | 17 Jan D<br>26 Oct R  | 11 April D<br>12 Dec R | 13 Mar R<br>17 Aug D  | 17 Feb R<br>17 July D | 17 Jan R<br>24 June D |
| 1978   | 21 Oct R<br>1 Dec D    | 3 Mar D                | 21 Feb D<br>27 Nov R  | 26 April D<br>25 Dec R | 15 Mar R<br>20 Aug D  | 21 Feb R<br>23 July D | 20 Jan R<br>27 June D |
| 1979   |                        |                        | 26 Mar D<br>27 Dec R  | 9 May D                | 18 Mar R<br>23 Aug D  | 26 Feb R<br>27 July D | 22 Jan ■<br>29 June D |
| 1980   | 27 May R<br>9 July D   | 17 Jan R<br>8 April D  | 27 April D            | ■ Jan R<br>23 May D    | 21 Mar R<br>25 Aug D  | 3 Mar R<br>3 Aug D    | 24 Jan R<br>1 July D  |

| Planet<br>Year | Venus<br>♀             | Mars<br>♂              | Jupiter<br>♃          | Saturn<br>♄            | Neptune<br>♆           | Uranus<br>♅            | Pluto<br>♇            |
|----------------|------------------------|------------------------|-----------------------|------------------------|------------------------|------------------------|-----------------------|
| 1981           |                        |                        | 26 Jan R<br>29 May D  | 19 Jan R<br>5 June D   | 30 Mar R<br>6 Sep D    | 5 Mar R<br>7 Aug D     | 18 Jun R<br>4 July D  |
| 1982           | 2 Jan R<br>12 Feb D    | 22 Feb R<br>13 May D   | 26 Feb R<br>29 June D | 2 Feb R<br>20 June D   | 2 April R<br>9 Sep D   | 12 Mar R<br>11 Aug D   | 2 Feb R<br>7 July D   |
| 1983           | 5 Aug R<br>17 Sep D    |                        | 29 Mar R<br>30 July D | 14 Feb R<br>3 July D   | 3 April R<br>11 Sep D  | 16 Mar R<br>16 Aug D   | 3 Feb R<br>10 July D  |
| 1984           |                        | 7 April R<br>21 June D | 2 May R<br>31 Aug D   | 26 Feb R<br>15 July D  | 5 April R<br>13 Sep D  | 20 Mar R<br>19 Aug D   | 6 Feb R<br>11 July D  |
| 1985           | 15 Mar R<br>26 April D |                        | 6 June R<br>4 Oct D   | 9 Mar R<br>27 July D   | 7 April R<br>15 Sep D  | 25 Mar R<br>25 Aug D   | 8 Feb R<br>15 July D  |
| 1986           | 17 Oct R<br>27 Nov D   | 10 June R<br>13 Aug D  | 14 July R<br>10 Nov D | 21 Mar R<br>9 Aug D    | 9 April R<br>16 Sep D  | 30 Mar R<br>29 Aug D   | 11 Feb R<br>17 July D |
| 1987           |                        |                        | 21 Aug R<br>17 Dec D  | 2 April R<br>21 Aug D  | 11 April R<br>20 Sep D | 3 April R<br>3 Sep D   | 14 Feb R<br>20 July D |
| 1988           | 14 May R<br>6 July D   | 28 Aug R<br>29 Oct D   | 26 Sep R              | 12 April R<br>2 Sep D  | 14 April R<br>21 Sep D | 7 April R<br>7 Sep D   | 16 Feb R<br>23 July D |
| 1989           | 30 Dec R               |                        | 21 Jan D<br>30 Oct R  | 25 April R<br>13 Sep D | 16 April R<br>23 Sep D | 11 April R<br>11 Sep D | 18 Feb R<br>26 July D |
| 1990           | 9 Feb D                | 22 Oct R               | 26 Feb D<br>2 Dec R   | 6 May R<br>25 Sep D    | 18 April R<br>27 Sep D | 15 April R<br>17 Sep D | 20 Feb R<br>28 July D |
| 1991           | 2 Aug R<br>14 Sep D    | 3 Jan D                | 2 April D             | 18 May R<br>6 Oct D    | 21 April R<br>28 Sep D | 20 April R<br>22 Sep D | 24 Feb R<br>31 July D |
| 1992           |                        | 30 Nov R               | 2 Jan R<br>2 May D    | 30 May R<br>18 Oct D   | 22 April R<br>2 Oct D  | 24 April R<br>25 Sep D | 26 Feb R<br>2 Aug D   |
| 1993           | 12 Mar R<br>24 April D | 16 Feb D               | 30 Jan R<br>2 June D  | 12 June R<br>30 Oct D  | 24 April R<br>2 Oct D  | 24 April R<br>30 Sep D | 2 Mar R<br>4 Aug D    |
| 1994           | 14 Oct R<br>25 Nov D   |                        | 2 Mar R<br>3 July D   | 25 June R<br>11 Nov D  | 28 April R<br>5 Oct D  | 2 May R<br>30 Oct D    | 3 Mar R<br>8 Aug D    |
| 1995           |                        | 4 Jan R<br>26 Mar D    | 1 April R<br>4 Aug R  | 7 July R<br>24 Nov D   | 30 April R<br>6 Oct D  | 8 May R<br>9 Oct D     | 6 Mar R<br>10 Aug D   |
| 1996           | 21 May R<br>3 July D   |                        | 6 May R<br>5 Sep D    | 20 July R<br>5 Dec D   | 3 May R<br>9 Oct D     | 11 May R<br>12 Oct D   | 11 Mar R<br>11 Aug D  |
| 1997           | 28 Dec R               | 7 Feb R<br>29 April D  | 11 June R<br>9 Oct D  | 3 Aug R<br>18 Dec D    | 3 May R<br>11 Oct D    | 15 May R<br>16 Oct D   | 11 Mar R<br>16 Aug D  |
| 1998           | 7 Feb D                |                        | 19 July R<br>15 Nov D | 17 Aug R<br>31 Dec D   | 7 May R<br>15 Oct D    | 19 May R<br>20 Oct D   | 13 Mar R<br>16 Aug D  |
| 1999           | 31 July R<br>12 Sep D  | 20 Mar R<br>5 June D   | 26 Aug R<br>22 Dec D  | 2 Sep R                | 9 May R<br>16 Oct D    | 24 May R<br>26 Oct D   | 16 Mar R<br>21 Aug D  |

# Retrogression Tables of Mercury

| 1890       | 1891       | 1892       | 1893       | 1894      | 1895      | 1896       |
|------------|------------|------------|------------|-----------|-----------|------------|
| 21 Jan R   | 5 Jan R    | 9 Jan D    | 23 Mar R   | 6 Mar R   | 17 Feb R  | ■ Feb R    |
| 10 Feb D   | 25 Jan D   | 10 April R | 15 April D | 28 Mar D  | 11 Mar D  | 22 Feb D   |
| 18 May R   | 30 April R | ■ May D    | 26 July R  | 7 July R  | 10 June R | 30 May R   |
| 11 June D  | 22 May D   | 11 Aug R   | 19 Aug D   | 31 July D | 13 July D | 23 June D  |
| 17 Sep R   | 30 Aug R   | 5 Sep D    | 16 Nov R   | 31 Oct R  | 15 Oct R  | 27 Sep R   |
| 8 Oct D    | 23 Sep D   | ■ Dec R    | 6 Dec D    | 20 Nov D  | 4 Nov D   | 11 Oct D   |
|            | 20 Dec R   | 23 Dec D   |            |           |           |            |
| 1897       | 1898       | 1899       | 1900       | 1901      | 1902      | 1903       |
| 14 Jan R   | 18 Jan D   | 1 Jan D    | 16 Mar R   | 27 Feb R  | 10 Feb R  | 25 Jan R   |
| ■ Feb D    | 21 April R | ■ April R  | 8 April D  | 21 Mar D  | 4 Mar D   | 15 Feb D   |
| 10 May R   | 15 May D   | 26 April D | 19 July R  | 2 July R  | 12 June R | 23 May R   |
| ■ June D   | 24 Aug R   | ■ Aug R    | 12 Aug D   | 25 July D | 6 July D  | 16 June D  |
| 10 Sep ■   | 26 Sep D   | 29 Aug D   | 10 Nov R   | 25 Oct ■  | 8 Oct R   | 21 Sep R   |
| 2 Oct D    | 13 Dec R   | 27 Nov R   | 30 Nov D   | 14 Nov D  | 20 Oct D  | 13 Oct D   |
| ■ Dec R    |            | 17 Dec D   |            |           |           |            |
| 1904       | 1905       | 1906       | 1907       | 1908      | 1909      | 1910       |
| ■ Jan R    | 12 Jan D   | 27 Mar R   | ■ Mar R    | 21 Feb R  | ■ Feb ■   | 18 Jan R   |
| ■ Jan D    | 14 April R | 10 April D | 1 April D  | 11 Mar D  | ■ Feb D   | 8 Feb D    |
| 3 May R    | 8 May D    | 30 July R  | 12 July R  | ■ June R  | ■ June R  | 15 May R   |
| ■ May D    | 17 Aug R   | 23 Aug D   | ■ Aug D    | 16 July D | 27 June D | ■ June ■   |
| 3 Sep R    | 9 Sep D    | 21 Nov R   | ■ Nov R    | 18 Oct R  | 2 Oct ■   | 14 Sep R   |
| 25 Sep D   | 7 Dec R    | 10 Dec D   | 24 Nov D   | 7 Nov D   | 22 Oct D  | 6 Oct D    |
| 23 Dec R   | 27 Dec D   |            |            |           |           |            |
| 1911       | 1912       | 1913       | 1914       | 1915      | 1916      | 1917       |
| 8 Jan R    | 5 Jan D    | 19 Mar R   | 2 Mar ■    | 11 Feb R  | 27 Jan R  | 10 Jan R   |
| ■ Jan D    | 6 April R  | 11 April D | 24 Mar D   | 6 Mar D   | 18 Feb D  | 31 Jan D   |
| 25 April R | 20 April D | ■ July R   | 4 July R   | 14 June R | 25 May R  | 6 May R    |
| 19 May D   | 9 Aug R    | 14 Aug D   | 27 July D  | 8 July D  | 18 June D | 30 May D   |
| 27 Aug ■   | 2 Sep D    | 13 Nov R   | 28 Oct R   | 10 Oct R  | 23 Sep R  | 6 Sep R    |
| 19 Sep D   | 29 Nov R   | 3 Dec D    | 17 Nov D   | 31 Oct D  | 14 Oct D  | 28 Sep D   |
| 16 Dec R   | 19 Dec D   |            |            |           |           | 25 Dec R   |
| 1918       | 1919       | 1920       | 1921       | 1922      | 1923      | 1924       |
| 14 Jan D   | 29 Mar R   | 11 Mar R   | 22 Feb R   | ■ Feb R   | 20 Jan ■  | ■ Jan R    |
| 17 April R | 22 April D | ■ April D  | 16 Mar D   | 27 Feb D  | 10 Feb D  | 24 Jan D   |
| 10 May D   | ■ Aug R    | 14 July R  | ■ June R   | 6 June R  | 18 May R  | 27 April R |
| 19 Aug R   | 25 Aug D   | 7 Aug D    | 19 July D  | ■ June D  | 10 June D | 21 May D   |
| 12 Sep D   | 23 Nov R   | 6 Nov R    | 20 Oct R   | 3 Oct R   | 10 Sep R  | 20 Aug R   |
| ■ Dec R    | 13 Dec D   | 26 Nov D   | 9 Nov D    | ■ Oct D   | ■ Oct D   | 21 Sep D   |
| 20 Dec D   |            |            |            |           |           | 18 Dec R   |



| 1925       | 1926       | 1927      | 1928      | 1929       | 1930       | 1931       |
|------------|------------|-----------|-----------|------------|------------|------------|
| 7 Jan D    | 22 Mar R   | 4 Mar R   | 16 Feb R  | 29 Jan R   | 13 Jan R   | 17 Jan D   |
| ■ April R  | 14 April D | 27 Mar D  | 9 Mar D   | 20 Feb D   | 3 Feb D    | 20 April R |
| 3 May D    | 25 July R  | 6 July R  | 17 June R | 28 May R   | 9 May R    | 14 May D   |
| 12 Aug R   | 18 Aug D   | 31 July D | 11 July D | 21 June D  | 3 June D   | 22 Aug R   |
| ■ Sep D    | 16 Nov R   | 30 Oct R  | 13 Oct R  | 26 Sep ■   | 9 Sep R    | 14 Sep D   |
| 2 Dec R    | 5 Dec D    | 19 Nov D  | 2 Nov D   | 17 Oct D   | 2 Oct D    | 12 Dec R   |
| 22 Dec D   |            |           |           |            | 28 Dec R   |            |
| 1932       | 1933       | 1934      | 1935      | 1936       | 1937       | 1938       |
| 2 Jan D    | 44 Mar R   | 25 Feb R  | 8 Feb R   | 23 Jan R   | 6 Jan R    | 10 Jan D   |
| 31 Mar R   | 6 April D  | 19 Mar D  | 2 Mar D   | 13 Feb D   | 26 Jan D   | 12 April R |
| 24 April D | 17 July R  | 28 June R | 9 June R  | 20 May R   | 2 May R    | 6 May D    |
| 4 Aug R    | 10 Aug D   | 22 July D | 3 July D  | 13 June D  | 24 May D   | 15 Aug R   |
| 27 Aug D   | 8 Nov R    | 23 Oct R  | 6 Oct R   | 18 Sep R   | 2 Sep R    | 7 Sep D    |
| 25 Nov R   | 28 Nov D   | 12 Nov D  | 27 Oct D  | 10 Oct D   | 24 Sep D   | 5 Dec R    |
| 14 Dec D   |            |           |           |            | 21 Dec R   | 24 Dec D   |
| 1939       | 1940       | 1941      | 1942      | 1943       | 1944       | 1945       |
| 25 Mar R   | 6 Mar R    | 17 Feb R  | 2 Feb R   | 10 Jan R   | 20 Jan D   | 3 Jan D    |
| 17 April D | 29 Mar D   | 12 Mar D  | 23 Feb D  | 6 Feb D    | 22 April R | ■ April R  |
| 28 July R  | 9 July R   | 20 June R | 2 June R  | 13 May ■   | 16 May D   | 27 April D |
| 21 Aug D   | 2 Aug D    | 14 July D | 25 June D | 5 June D   | 24 Aug R   | 7 Aug R    |
| 19 Nov R   | 2 Nov R    | 15 Oct R  | 29 Sep R  | 12 Sep R   | 16 Sep D   | 30 Aug D   |
| 8 Dec D    | 21 Nov D   | 5 Nov D   | 20 Oct D  | 4 Oct D    | 14 Dec R   | 27 Nov R   |
|            |            |           |           | 31 Dec R   |            | 17 Dec D   |
| 1946       | 1947       | 1948      | 1949      | 1950       | 1951       | 1952       |
| 17 Mar R   | 28 Feb R   | 11 Feb R  | 25 Jan R  | 9 Jan R    | 14 Jan D   | 28 Mar R   |
| 9 April D  | 22 Mar D   | 4 Mar D   | 15 Feb D  | 30 Jan D   | 15 April R | 20 April I |
| 20 July R  | 2 July R   | 11 June R | 24 May R  | 4 May R    | 8 May D    | 31 July R  |
| 13 Aug D   | 26 July D  | 6 July D  | 16 June D | 28 May D   | 17 Aug R   | 24 Aug D   |
| 11 Nov R   | 26 Oct R   | 8 Oct R   | 22 Sep R  | 4 Sep R    | 10 Sep D   | 21 Nov ■   |
| 2 Dec D    | 15 Nov D   | 29 Oct D  | 13 Oct D  | 27 Sep D   | 7 Dec R    | 11 Dec D   |
|            |            |           |           | 24 Dec R   | 26 Dec D   |            |
| 1953       | 1954       | 1955      | 1956      | 1957       | 1958       | 1959       |
| 10 Mar R   | 21 Feb R   | 5 Feb R   | 18 Jan R  | 2 Jan R    | 6 Jan D    | 20 Mar ■   |
| 1 April D  | 15 Mar D   | 26 Feb D  | ■ Feb D   | 23 Jan D   | 8 April R  | 12 April D |
| 13 July R  | 24 June R  | ■ June R  | 16 May R  | 26 April R | 30 April D | 23 July R  |
| ■ Aug D    | 18 July D  | 28 June D | 8 June D  | 20 May D   | 11 Aug R   | 16 Aug D   |
| 5 Nov R    | 1 Oct R    | 10 Oct R  | 14 Sep R  | 28 Aug R   | 3 Sep D    | 14 Nov R   |
| 25 Nov D   | 9 Nov D    | 22 Oct D  | 6 Oct D   | 20 Sep D   | 1 Dec R    | 4 Dec D    |
|            |            |           |           | 17 Dec R   | 21 Dec D   |            |

| 1960      | 1961      | 1962       | 1963       | 1964       | 1965       | 1966      |
|-----------|-----------|------------|------------|------------|------------|-----------|
| ■ Mar R   | 14 Feb R  | 29 Jan R   | 12 Jan R   | 15 Jan D   | 31 Mar R   | 13 Mar R  |
| 25 Mar D  | 8 Mar D   | 19 Feb D   | 1 Feb D    | 18 April R | 23 April D | ■ April D |
| ■ July R  | 16 June R | 28 May R   | 6 May-R    | 12 May D   | ■ Aug R    | 15 July R |
| 29 July D | 10 July D | 21 June D  | 30 May D   | 21 Aug R   | 27 Aug D   | ■ Aug D   |
| 29 Oct R  | 12 Oct R  | 25 Sep R   | 6 Sep R    | 12 Sep D   | 24 Nov R   | 8 Nov R   |
| 18 Nov D  | 1 Nov D   | 16 Oct D   | 28 Sep D   | 10 Dec R   | 14 Dec D   | 28 Nov D  |
|           |           |            | 26 Dec R   | 30 Dec D   |            |           |
| 1967      | 1968      | 1969       | 1970       | 1971       | 1972       | 1973      |
| 24 Feb R  | 7 Feb R   | 21 Jan R   | ■ Jan R    | 9 Jan D    | 23 Mar R   | ■ Mar R   |
| 17 Mar D  | 28 Feb D  | 10 Feb D   | 25 Jan D   | 10 April R | 15 April D | ■ Mar D   |
| 28 June R | ■ June R  | 18 May R   | 30 April R | ■ May D    | 26 July R  | 7 July R  |
| 20 July D | 30 June D | 11 June D  | 22 May D   | 11 Aug R   | 19 Aug D   | 31 July D |
| 20 Oct R  | 4 Oct R   | 17 Sep R   | 30 Aug R   | 5 Sep D    | ■ Nov R    | 31 Oct R  |
| 11 Nov D  | 25 Oct D  | 8 Oct D    | 23 Sep D   | 3 Dec R    | 6 Dec D    | 20 Nov D  |
|           |           |            | ■ Dec R    | 23 Dec D   |            |           |
| 1974      | 1975      | 1976       | 1977       | 1978       | 1979       | 1980      |
| 17 Feb R  | 1 Feb R   | 14 Jan R   | 18 Jan D   | 2 Jan D    | 16 Mar R   | 27 Feb R  |
| 11 Mar D  | 22 Feb D  | 4 Feb D    | 21 April R | 3 April R  | ■ April D  | 21 Mar D  |
| 19 June R | ■ May R   | 10 May R   | ■ May D    | 26 April D | 19 July R  | 1 July R  |
| 13 July D | ■ June D  | 3 June D   | 24 Aug R   | 6 Aug R    | 12 Aug D   | 25 July D |
| 15 Oct R  | 27 Sep R  | 10 Sep R   | 10 Sep D   | 29 Aug D   | 10 Nov R   | 25 Oct R  |
| ■ Nov D   | 18 Oct D  | 2 Oct D    | 11 Dec R   | 27 Nov R   | 30 Nov D   | 14 Nov D  |
|           |           | ■ Dec R    |            | 17 Dec D   |            |           |
| 1981      | 1982      | 1983       | 1984       | 1985       | 1986       | 1987      |
| 10 Feb R  | 24 Jan R  | 8 Jan R    | 12 Jan D   | 26 Mar R   | 8 Mar R    | 20 Feb R  |
| 3 Mar D   | 14 Feb D  | 29 Jan D   | 13 April R | 18 April D | 31 Mar D   | 15 Mar D  |
| 11 June R | 22 May R  | 3 May R    | 7 May D    | 29 July R  | 11 July R  | 22 June R |
| 5 July D  | 15 June R | 27 May D   | 16 Aug R   | 22 Aug D   | 4 Aug D    | 16 July D |
| 7 Oct R   | 20 Sep R  | 3 Sep R    | 8 Sep D    | 20 Nov R   | 3 Nov R    | 18 Oct R  |
| 28 Oct D  | 12 Sep D  | 26 Sep D   | 6 Dec R    | 9 Dec D    | 23 Nov D   | 7 Nov D   |
|           |           | 23 Dec R   | 26 Dec D   |            |            |           |
| 1988      | 1989      | 1990       | 1991       | 1992       | 1993       | 1994      |
| 3 Feb R   | 17 Jan R  | 2 Jan R    | 5 Jan D    | 18 Mar R   | 2 Mar R    | 12 Feb R  |
| 25 Feb D  | 7 Feb D   | 21 Jan D   | 6 April R  | 10 April D | 24 Mar D   | 6 Mar D   |
| 2 June R  | 14 May R  | 24 April R | 29 April D | 21 July R  | 3 July R   | 14 June R |
| 26 June D | 6 June D  | 18 May D   | 9 Aug R    | 14 Aug D   | 27 July D  | 8 July D  |
| 30 Sep R  | 13 Sep R  | 27 Aug R   | 2 Sep D    | 12 Nov R   | 27 Oct R   | 10 Oct R  |
| 21 Oct D  | 5 Oct D   | 19 Sep D   | 30 Nov R   | 2 Dec D    | 16 Nov D   | 31 Oct D  |
|           |           | 16 Dec R   | 13 Dec D   |            |            |           |

| 1995      | 1996     | 1997       | 1998       | 1999      | 2000      |
|-----------|----------|------------|------------|-----------|-----------|
| 27 Jan R  | 11 Jan R | 14 Jan D   | 29 Mar R   | 11 Mar R  | 22 Feb R  |
| 17 Feb D  | 31 Jan D | 16 April R | 21 April D | 1 April D | 16 Mar D  |
| 25 May R  | 5 May R  | 10 May D   | 1 Aug R    | 14 July R | 25 June R |
| 18 June D | 29 May D | 19 Aug R   | 25 Aug D   | 7 Aug D   | 19 July D |
| 23 Sep R  | 5 Sep R  | 11 Sep D   | 22 Nov R   | 6 Nov R   | 10 Oct R  |
| 15 Oct D  | 25 Dec R | 9 Dec R    | 12 Dec D   | 26 Nov D  | 9 Nov D   |
|           | 25 Dec R | 28 Dec D   |            |           |           |

**RAMAN'S**  
**One Hundred and Ten-Year Ephemeris**  
**of**  
**PLANETARY POSITIONS**  
**(1891 to 2000 A.D.)**

## Longitudes of Planets

|       | 1891 | Sun    | Mars   | Merc.   | Merc.   | Jupiter | Venus  | Saturn  | Rahu  |
|-------|------|--------|--------|---------|---------|---------|--------|---------|-------|
| Jan.  | 5    | 284 55 | 344 33 | 300 25R | 277 16  | 315 29  | 247 2  | 167 7R  | 72 58 |
|       | 15   | 295 6  | 352 1  | 291 0   | 281 55  | 317 45  | 252 34 | 168 52  | 72 58 |
|       | 25   | 306 17 | 359 26 | 284 21D | 286 3   | 328 5   | 260 6  | 166 27  | 71 55 |
| Feb.  | 5    | 315 26 | 6 22   | 289 52  | 295 2   | 322 28  | 268 59 | 165 57  | 71 23 |
|       | 14   | 325 33 | 14 9   | 301 6   | 307 48  | 324 52  | 278 47 | 165 12  | 70 52 |
|       | 24   | 335 38 | 21 25  | 315 1   | 322 42  | 327 16  | 289 13 | 164 27  | 70 20 |
| March | 6    | 345 39 | 28 38  | 330 50  | 339 25  | 329 38  | 300 4  | 163 32  | 69 48 |
|       | 16   | 355 38 | 35 10  | 348 30  | 358 4   | 331 58  | 311 15 | 162 52  | 69 16 |
|       | 26   | 5 33   | 42 51  | 8 5     | 18 19   | 334 14  | 322 39 | 162 7   | 68 45 |
| April | 5    | 15 25  | 49 51  | 28 17   | 37 16   | 336 25  | 334 13 | 161 29  | 68 13 |
|       | 15   | 25 14  | 56 47  | 44 35   | 49 49   | 338 29  | 345 54 | 160 57  | 67 41 |
|       | 25   | 34 59  | 63 40  | 52 43   | 53 15R  | 340 25  | 357 41 | 160 35  | 67 11 |
| May   | 5    | 44 41  | 70 28  | 51 43   | 48 56   | 342 11  | 33 33  | 160 22  | 66 37 |
|       | 15   | 54 21  | 77 12  | 46 6    | 44 23   | 343 46  | 21 28  | 160 20D | 65 59 |
|       | 25   | 63 57  | 83 54  | 44 23D  | 46 15   | 345 9   | 33 25  | 160 28  | 65 11 |
| June  | 5    | 73 32  | 90 32  | 49 49   | 54 55   | 346 17  | 45 25  | 160 46  | 65 11 |
|       | 14   | 83 6   | 97 7   | 61 23   | 69 8    | 347 9   | 57 28  | 161 14  | 64 30 |
|       | 24   | 92 38  | 103 40 | 78 6    | 88 7    | 347 44  | 69 32  | 161 51  | 63 51 |
| July  | 4    | 102 10 | 110 10 | 98 49   | 106 37  | 348 00  | 81 40  | 162 50  | 63 27 |
|       | 14   | 111 43 | 116 38 | 120 11  | 129 47  | 347 57R | 93 50  | 163 28  | 62 55 |
|       | 24   | 121 15 | 123 4  | 138 49  | 147 7   | 347 34  | 106 2  | 164 27  | 62 23 |
| Aug.  | 3    | 130 49 | 129 29 | 154 42  | 161 31  | 346 53  | 118 17 | 165 31  | 61 51 |
|       | 13   | 140 25 | 135 11 | 167 31  | 172 31  | 345 56  | 130 35 | 166 39  | 61 19 |
|       | 23   | 151 51 | 142 15 | 176 11  | 178 21  | 344 11  | 142 56 | 167 50  | 60 48 |
| Sep.  | 2    | 159 42 | 148 37 | 178 14R | 175 34  | 343 29  | 155 19 | 169 4   | 60 16 |
|       | 12   | 169 25 | 154 58 | 170 50  | 181 11  | 342 10  | 167 45 | 170 19  | 59 44 |
|       | 22   | 179 10 | 161 19 | 164 16  | 166 21D | 340 54  | 180 12 | 171 34  | 59 13 |
| Oct.  | 2    | 188 59 | 167 40 | 171 51  | 179 24  | 339 49  | 192 40 | 172 11  | 58 41 |
|       | 12   | 198 52 | 174 00 | 187 51  | 186 29  | 338 57  | 205 10 | 174 00  | 58 9  |
|       | 22   | 208 48 | 180 21 | 205 2   | 213 23  | 338 23  | 217 39 | 175 8   | 57 37 |
| Nov.  | 1    | 218 48 | 186 41 | 221 31  | 229 29  | 338 9D  | 230 10 | 176 13  | 57 6  |
|       | 11   | 228 50 | 193 2  | 237 17  | 244 58  | 338 15  | 242 40 | 177 11  | 56 34 |
|       | 21   | 238 55 | 199 22 | 252 31  | 259 57  | 338 41  | 255 10 | 178 4   | 56 2  |
| Dec.  | 1    | 249 11 | 205 43 | 267 10  | 273 56  | 339 27  | 267 48 | 178 11  | 55 30 |
|       | 11   | 259 12 | 212 3  | 279 47  | 283 44  | 340 30  | 280 10 | 179 11  | 54 58 |
|       | 21   | 269 23 | 212 23 | 284 13R | 280 1   | 341 49  | 292 39 | 179 49  | 54 26 |
|       | 31   | 279 34 | 224 42 | 272 31  | 269 1   | 343 23  | 305 6  | 180 11  | 53 55 |

Ayanamsa : 20° 53' 17"

1891 A.D.

## RAMAN'S EPHEMERIS

3

## Longitude of the Moon

|       | 1891 | Sun.   | Tues.  | Thurs. | Sat.   | Mon.   | Wed.   | Fri.   |
|-------|------|--------|--------|--------|--------|--------|--------|--------|
| Jan.  | 1    |        |        | 169 41 | 193 43 | 218 41 | 245 9  | 273 22 |
|       | 11   | 302 59 | 333 1  | 2 17   | 30 8   | 56 34  | 81 53  | 106 28 |
|       | 25   | 130 35 | 154 24 | 178 8  | 202 9  |        |        |        |
| Feb.  | 1    | 214 25 | 239 50 | 266 56 | 295 57 | 326 21 | 356 48 | 25 ■   |
|       | 15   | 53 17  | 78 58  | 103 32 | 127 32 | 151 19 | 175 6  | 199 ■  |
| March | 1    | 223 29 | 248 50 | 275 38 | 304 16 | 334 26 | 4 59   | 34 31  |
|       | 15   | 62 10  | 88 0   | 112 32 | 136 25 | 160 8  | 184 ■  | 208 16 |
|       | 29   | 233 2  | 258 37 |        |        |        |        |        |
| April | 1    |        |        |        |        |        | 271 50 | 299 18 |
|       | 5    | 328 14 | 358 10 | 28 1   | 56 39  | 83 32  | 108 49 | 133 1  |
|       | 19   | 156 47 | 180 31 | 204 56 | 229 53 | 225 37 | 282 14 |        |
| May   | 1    |        |        |        |        |        |        | 309 48 |
|       | 3    | 338 20 | 7 27   | 36 30  | 64 90  | 91 27  | 116 48 | 141 6  |
|       | 17   | 164 55 | 188 01 | 213 22 | 238 49 | 265 17 | 292 41 | 320 45 |
|       | 31   | 349 11 |        |        |        |        |        |        |
| June  | 1    |        |        |        |        | 3 26   | 31 47  | 59 35  |
|       | 7    | 86 28  | 112 15 | 137 58 | 160 58 | 184 46 | 208 58 | 234 9  |
|       | 21   | 260 39 | 283 26 | 317 ■  | 345 57 | 14 24  |        |        |
| July  | 1    |        |        |        |        |        | 42 8   | 69 6   |
|       | 5    | 95 15  | 120 34 | 145 1  | 169 0  | 192 44 | 216 54 | 242 6  |
|       | 19   | 268 53 | 297 19 | 326 51 | 356 26 | 25 10  | 52 40  | 79 3   |
| Aug.  | 1    |        |        |        | 91 53  | 117 1  | 141 31 | 165 50 |
|       | 9    | 189 11 | 213 00 | 237 30 | 263 22 | 291 6  | 320 36 | 350 57 |
|       | 23   | 20 49  | 49 15  | 75 4   | 101 37 | 126 18 |        |        |
| Sep.  | 1    | —      | 138 25 | 162 22 | 186 5  | 209 47 | 233 52 | 258 53 |
|       | 11   | 285 27 | 313 57 | 344 5  | 14 41  | 44 21  | 72 17  | 93 28  |
|       | 27   | 123 22 | 147 30 |        |        |        |        |        |
| Oct.  | 1    |        |        | 171 17 | 194 11 | 218 51 | 243 ■  | 268 10 |
|       | 11   | 294 42 | 322 48 | 352 28 | 22 48  | 52 35  | 80 48  | 107 14 |
|       | 25   | 132 13 | 156 17 | 179 59 | 203 46 |        |        |        |
| Nov.  | 1    | 215 46 | 240 12 | 265 20 | 291 22 | 318 34 | 346 58 | 16 20  |
|       | 15   | 45 54  | 74 46  | 102 11 | 128 2  | 152 35 | 176 25 | 200 8  |
|       | 29   | 224 16 |        |        |        |        |        |        |
| Dec.  | 1    |        | 249 10 | 275 1  | 301 46 | 329 18 | 357 28 | 26 3   |
|       | 13   | 54 39  | 82 48  | 109 57 | 135 48 | 160 36 | 184 17 | 208 00 |
|       | 27   | 232 14 | 257 31 | 284 6  |        |        |        |        |

Ayanamsa : 20° 53' 17"



## Longitudes of Planets

|       | 1892 | Sun    | Mars    | Mer.    | Mer.    | Jupit. | Venus   | Saturn | Rahu  |
|-------|------|--------|---------|---------|---------|--------|---------|--------|-------|
| Jan.  | 5    | 284 40 | 227 52  | 269 1R  | 32D     | 344 15 | 311 20  | 180 8  | 53 39 |
|       | 15   | 294 51 | 234 09  | 271 10D | 275 11  | 346 11 | 323 44  | 180 7R | 53 7  |
|       | 25   | 305 11 | 240 28  | 281 11  | 287 53  | 348 8  | 331 3   | 179 56 | 52 35 |
| Feb.  | 4    | 315 11 | 296 40  | 294 51  | 302 12  | 350 15 | 348 21  | 179 34 | 52 3  |
|       | 14   | 325 18 | 252 51  | 309 11  | 318 1   | 352 30 | 0 30    | 179 13 | 51 32 |
|       | 24   | 335 23 | 259 00  | 326 31  | 324 24  | 354 11 | 12 34   | 178 23 | 51 00 |
| March | 4    | 345 25 | 265 41  | 346 38  | 353 24  | 357 23 | 25 40   | 177 11 | 50 25 |
|       | 16   | 356 11 | 271 40  | 6 17    | 15 44   | 359 53 | 37 21   | 176 49 | 49 53 |
|       | 26   | 367 18 | 277 34  | 23 58   | 30 8    | 2 19   | 48 11   | 176 2  | 49 22 |
| April | 5    | 378 10 | 283 18  | 33 42   | 26R     | 4 43   | 60 00   | 175 17 | 48 50 |
|       | 15   | 389 58 | 288 53  | 32 41   | 29 27   | 7 11   | 70 48   | 174 36 | 48 18 |
|       | 25   | 395 43 | 294 14  | 21 14   | 24 18   | 9 27   | 81 7    | 174 11 | 47 46 |
| May   | 5    | 406 25 | 299 18  | 24 17D  | 29 10   | 11 42  | 90 48   | 173 40 | 47 15 |
|       | 15   | 417 11 | 304 00  | 29 11   | 34 42   | 18 50  | 101 35  | 173 24 | 46 43 |
|       | 25   | 428 41 | 308 14  | 40 54   | 11 13   | 15 53  | 107 7   | 173 19 | 46 11 |
| June  | 4    | 439 16 | 311 51  | 56 35   | 65 57   | 17 47  | 112 40D | 173 25 | 45 39 |
|       | 14   | 450 49 | 314 40  | 76 16   | 87 7    | 19 31  | 115 52  | 173 40 | 45 8  |
|       | 24   | 462 22 | 316 32  | 93 1    | 108 27  | 21 03  | 116 23R | 174 5  | 44 35 |
| July  | 4    | 473 54 | 317 14  | 118 10  | 127 11  | 22 23  | 111 7   | 174 39 | 44 4  |
|       | 14   | 485 26 | 316 42R | 135 7   | 144 20  | 23 27  | 105 11  | 175 21 | 43 32 |
|       | 24   | 496 59 | 314 58  | 148 40  | 163 59  | 24 15  | 100 35  | 176 11 | 43 00 |
| Aug.  | 3    | 508 33 | 312 27  | 158 3   | 180 35  | 24 43  | 99 49D  | 177 6  | 42 28 |
|       | 13   | 519 8  | 309 11  | 161 11  | 189 27  | 24 10R | 102 37  | 178 10 | 41 57 |
|       | 23   | 530 46 | 307 55  | 155 42  | 191 14  | 24 47  | 108 10  | 179 11 | 41 25 |
| Sep.  | 2    | 542 26 | 307 5D  | 145 15  | 199 28D | 24 18  | 115 34  | 180 26 | 40 53 |
|       | 12   | 553 9  | 307 36  | 152 17  | 195 58  | 23 32  | 124 17  | 181 38 | 40 21 |
|       | 22   | 564 55 | 309 22  | 167 19  | 176 11  | 22 29  | 133 55  | 182 52 | 39 49 |
| Oct.  | 2    | 576 45 | 312 16  | 185 20  | 194 9   | 21 16  | 144 14  | 184 7  | 39 18 |
|       | 12   | 588 37 | 316 11  | 202 41  | 210 11  | 19 11  | 155 5   | 185 19 | 38 46 |
|       | 22   | 599 34 | 320 35  | 218 11  | 226 38  | 18 35  | 166 19  | 186 31 | 38 14 |
| Nov.  | 1    | 611 33 | 325 41  | 234 10  | 241 30  | 17 20  | 177 52  | 187 50 | 37 42 |
|       | 11   | 623 36 | 331 11  | 248 35  | 255 18  | 16 19  | 189 41  | 188 44 | 37 11 |
|       | 21   | 635 41 | 337 3   | 261 21  | 266 11  | 15 33  | 201 40  | 189 44 | 36 33 |
| Dec.  | 1    | 647 49 | 343 8   | 268 39R | 267 26  | 15 6   | 213 47  | 190 36 | 36 7  |
|       | 11   | 659 58 | 349 24  | 261 40  | 255 18  | 14 59D | 226 2   | 191 22 | 35 36 |
|       | 21   | 671 9  | 355 49  | 252 28D | 253 14  | 15 13  | 238 22  | 191 58 | 35 3  |
|       | 31   | 683 21 | 2 19    | 257 38  | 263 11  | 15 48  | 250 44  | 192 25 | 34 32 |

Ayanamsa : 20° 54' 8"

## Longitude of the Moon

| 1892    | Sun.   | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  |        |        |        |        |        |        | 297 50 |
| 3       | 325 54 | 354 18 | 22 36  | 50 34  | 78 5   | 105 0  | 131 2  |
| 17      | 156 4  | 180 13 | 203 53 | 227 44 | 252 11 | 278 41 | 306 32 |
| 31      | 335 32 |        |        |        |        |        |        |
| Feb. 1  |        |        |        |        | 350 12 | 19 14  | 47 28  |
| 7       | 74 46  | 101 16 | 127 11 | 162 4  | 176 22 | 200 7  | 233 41 |
| 21      | 247 52 | 273 13 | 300 20 | 329 16 | 359 15 |        |        |
| March 1 |        | 14 15  | 43 36  | 71 37  | 98 18  | 123 55 | 148 55 |
| 13      | 172 59 | 196 47 | 220 23 | 244 12 | 268 48 | 294 49 | 322 42 |
| 27      | 352 19 | 22 45  | 158 41 |        |        |        |        |
| April 1 |        |        |        |        |        |        | 67 9   |
| 11      | 94 48  | 120 55 | 146 11 | 169 11 | 192 44 | 217 22 | 241 10 |
| 17      | 265 29 | 290 11 | 317 11 | 345 55 | 15 45  | 49 5   | 75 38  |
| May 1   | 103 40 | 129 58 | 154 52 | 178 52 | 202 30 | 226 12 | 250 17 |
| 15      | 275 1  | 300 11 | 327 24 | 355 11 | 24 38  | 54 24  | 83 47  |
| 29      | 111 55 | 138 24 |        |        |        |        |        |
| June 1  |        |        |        |        |        | 151 11 | 175 36 |
| 5       | 199 10 | 222 50 | 246 56 | 271 49 | 297 11 | 324 17 | 351 11 |
| 19      | 20 4   | 55 55  | 77 53  | 106 17 | 133 27 | 159 7  |        |
| July 1  |        |        |        |        |        |        | 183 32 |
| 8       | 207 16 | 231 00 | 255 21 | 280 44 | 307 16 | 334 42 | 2 41   |
| 17      | 30 54  | 59 12  | 87 21  | 114 59 | 141 40 | 167 7  | 191 28 |
| 31      | 215 10 |        |        |        |        |        |        |
| Aug. 1  |        |        |        |        | 227 00 | 251 2  | 276 6  |
| 7       | 302 11 | 330 25 | 359 00 | 27 41  | 56 00  | 83 47  | 110 58 |
| 21      | 137 25 | 162 57 | 187 31 | 211 21 | 234 57 | 258 57 |        |
| Sep. 1  |        |        | 271 20 | 297 13 | 324 48 | 353 46 | 23 18  |
| 11      | 52 27  | 80 41  | 107 51 | 134 3  | 159 23 | 183 56 | 207 51 |
| 25      | 231 25 | 255 6  | 279 31 |        |        |        |        |
| Oct. 1  |        |        |        | 305 17 | 332 50 | 2 5    | 32 13  |
| 9       | 62 5   | 90 48  | 118 1  | 143 52 | 168 41 | 192 48 | 216 30 |
| 23      | 240 4  | 261 50 | 288 16 | 313 52 | 341 6  |        |        |
| Nov. 1  |        | 23 23  | 25 6   | 55 11  | 85 13  | 113 55 | 140 35 |
| 13      | 165 43 | 189 51 | 213 30 | 237 5  | 260 11 | 285 14 | 310 21 |
| 27      | 336 34 | 4 12   |        |        |        |        |        |
| Dec. 1  |        |        | 11 20  | 63 27  | 93 29  | 122 17 | 140 11 |
| 11      | 174 27 | 198 31 | 222 5  | 245 45 | 269 53 | 294 43 | 310 18 |
| 25      | 346 43 | 14 7   | 42 34  | 71 55  |        |        |        |

Ayanamsa: 20° 54' 8"

## RAMAN'S EPHEMERIS

1893 A.D.

## Longitudes of Planets

| 1893   | Sun       | Mars   | Merc.   | Merc.   | Jupit. | Venus  | Saturn  | Rahu  |
|--------|-----------|--------|---------|---------|--------|--------|---------|-------|
| Jan.   | 5 285 27  | 5 36   | 263 8   | 269 29  | 11 12  | 256 57 | 192 35  | 34 16 |
|        | 15 295 38 | 12 12  | 276 22  | 277 37  | 17 14  | 269 23 | 192 46  | 33 45 |
|        | 25 305 43 | 18 47  | 291 11  | 298 56  | 18 33  | 281 51 | 192 47R | 33 13 |
| Feb.   | 4 315 57  | 25 28  | 307 2   | 315 27  | 20 5   | 294 17 | 192 37  | 32 41 |
|        | 14 326 11 | 32 6   | 324 14  | 333 20  | 21 50  | 306 47 | 192 17  | 32 09 |
|        | 24 336 9  | 38 44  | 342 44  | 352 14  | 23 45  | 319 15 | 191 48  | 31 37 |
| March. | 11 346 10 | 45 21  | 1 15    | 8 54    | 25 48  | 331 40 | 191 11  | 31 11 |
|        | 16 356 9  | 51 57  | 14 15   | 16 11   | 27 58  | 344 7  | 190 29  | 30 34 |
|        | 26 366 6  | 58 31  | 15 26R  | 12 4R   | 30 13  | 356 32 | 189 42  | 30 2  |
| April  | 5 15 55   | 65 3   | 8 5     | 5 17    | 32 33  | 1 56   | 188 57R | 29 30 |
|        | 15 25 44  | 71 34  | 4 31D   | 5 52    | 34 56  | 21 20  | 188 11  | 28 59 |
|        | 25 35 28  | 78 2   | 9 0     | 13 35   | 37 10  | 33 41  | 187 31  | 28 26 |
| May    | 5 45 11   | 84 30  | 19 24   | 22 13   | 39 42  | 46 0   | 186 55  | 27 55 |
|        | 15 54 50  | 90 55  | 1 56    | 42 32   | 42 5   | 58 21  | 185 29  | 27 26 |
|        | 25 64 27  | 97 19  | 11 0    | 62 20   | 44 25  | 70 38  | 186 10  | 26 51 |
| June   | 4 74 2    | 103 42 | 73 13   | 74 10   | 46 42  | 82 11  | 186 2   | 26 19 |
|        | 14 83 35  | 110 11 | 94 40   | 104 24  | 48 55  | 95 11  | 186 3D  | 25 43 |
|        | 24 93 11  | 116 26 | 113 16  | 121 7   | 51 1   | 107 26 | 186 14  | 25 16 |
| July   | 1 101 40  | 122 45 | 128 0   | 133 51  | 53 0   | 119 40 | 186 11  | 24 44 |
|        | 14 112 12 | 129 5  | 138 29  | 141 40  | 54 50  | 131 55 | 187 6   | 24 12 |
|        | 24 121 45 | 135 26 | 143 5   | 142 5R  | 56 31  | 144 7  | 187 46  | 23 41 |
| Aug.   | 3 131 19  | 141 46 | 139 48R | 135 58  | 58 0   | 156 18 | 188 32  | 23 9  |
|        | 11 140 54 | 148 6  | 132 23  | 131 3   | 59 15  | 168 38 | 189 25  | 22 37 |
|        | 23 150 32 | 154 28 | 132 42D | 137 23  | 60 15  | 180 35 | 190 26  | 22 5  |
| Sep.   | 2 160 11  | 160 51 | 144 42  | 153 31  | 60 11  | 192 40 | 191 36  | 21 11 |
|        | 12 169 55 | 167 14 | 162 57  | 172 11  | 61 23  | 204 41 | 192 39  | 21 2  |
|        | 22 179 41 | 173 39 | 181 29  | 190 14  | 61 27R | 216 38 | 193 49  | 20 30 |
| Oct.   | 2 189 30  | 180 3  | 193 37  | 204 39  | 61 10  | 228 33 | 195 3   | 19 59 |
|        | 12 199 23 | 186 34 | 214 22  | 221 48  | 60 37  | 240 20 | 196 15  | 19 27 |
|        | 22 209 19 | 193 11 | 228 55  | 235 40  | 59 45  | 252 1  | 197 28  | 18 56 |
| Nov.   | 1 219 11  | 199 38 | 241 58  | 247 23  | 58 37  | 263 36 | 198 41  | 18 23 |
|        | 11 229 21 | 200 10 | 251 24  | 252 56R | 57 18  | 274 58 | 199 50  | 17 51 |
|        | 21 239 27 | 212 46 | 260 35R | 244 33  | 55 58  | 286 2  | 200 54  | 17 20 |
| Dec.   | 1 249 34  | 219 22 | 238 37  | 236 43D | 54 39  | 298 47 | 201 54  | 16 48 |
|        | 11 259 44 | 226 8  | 238 54D | 243 38  | 53 11  | 306 11 | 202 47  | 16 16 |
|        | 21 269 53 | 232 51 | 249 43  | 256 29  | 52 29  | 316 19 | 203 35  | 15 44 |
|        | 31 280 11 | 239 36 | 263 40  |         | 51 49  | 324 21 | 204 12  | 15 12 |

Ayanamasa: 20° 54' 58"

# RAMAN'S EPHEMERIS

7

## Longitude of the Moon

| 193   | Sun.      | Tue.   | Thur   | Sat.   | Mon.   | Wed.   | Fri.   |
|-------|-----------|--------|--------|--------|--------|--------|--------|
| Jan.  | 1 86 43   | 115 57 | 143 52 | 170 4  | 194 44 | 218 30 | 242 67 |
|       | 15 266 9  | 291 5  | 316 57 | 343 39 | 10 58  | 38 50  | 67 11  |
|       | 29 95 51  | 124 16 |        |        |        |        |        |
| Feb.  | 1         |        |        |        |        | 138 9  | 164 57 |
|       | 5 190 17  | 214 29 | 238 7  | 261 56 | 286 36 | 312 20 | 339 31 |
|       | 19 7 25   | 35 39  | 63 56  | 92 2   | 119 48 |        |        |
| March | 1         |        |        |        |        | 146 56 | 173 5  |
|       | 5 198 8   | 222 16 | 245 56 | 269 47 | 294 27 | 320 29 | 348 2  |
|       | 19 16 44  | 45 52  | 74 44  | 102 52 | 130 6  | 156 24 | 181 49 |
| April | 1         |        |        | 194 13 | 218 27 | 242 13 | 265 54 |
|       | 9 290 3   | 315 16 | 342 3  | 10 30  | 40 9   | 70 2   | 99 11  |
|       | 23 127 0  | 153 25 | 178 41 | 203 8  |        |        |        |
| May   | 1         |        |        |        | 227 3  | 250 44 | 274 28 |
|       | 7 298 29  | 323 57 | 350 21 | 18 39  | 48 27  | 78 51  | 108 34 |
|       | 21 136 43 | 163 6  | 188 5  | 212 11 | 235 54 | 259 34 |        |
| June  | 1         |        | 271 28 | 295 14 | 320 18 | 346 11 | 13 10  |
|       | 11 41 57  | 72 1   | 102 22 | 131 40 | 159 8  | 184 48 | 209 10 |
|       | 25 232 54 | 256 33 | 280 29 |        |        |        |        |
| July  | 1         |        |        | 304 56 | 330 1  | 355 55 | 22 56  |
|       | 9 51 17   | 80 50  | 110 48 | 139 59 | 167 31 | 193 15 | 217 39 |
|       | 23 241 23 | 266 7  | 289 18 | 314 12 | 339 50 |        |        |
| Aug.  | 1         | 352 56 | 19 43  | 47 22  | 75 55  | 105 5  | 134 6  |
|       | 13 162 8  | 188 37 | 213 37 | 237 39 | 261 22 | 285 25 | 310 15 |
|       | 27 336 4  | 2 49   | 30 17  |        |        |        |        |
| Sep.  | 1         |        |        |        |        |        | 44 14  |
|       | 3 72 27   | 100 54 | 129 15 | 157 1  | 183 43 | 209 11 | 253 35 |
|       | 17 257 24 | 281 14 | 305 42 | 331 16 | 358 9  | 26 8   | 54 46  |
| Oct.  | 1         | 83 27  | 139 28 | 166 20 | 192 18 | 217 20 | 241 35 |
|       | 15 265 21 | 289 9  | 313 32 | 339 6  | 6 14   | 34 53  | 64 27  |
|       | 29 93 56  | 122 33 |        |        |        |        |        |
| Nov.  | 1         |        |        |        |        | 136 24 | 163 9  |
|       | 5 188 51  | 213 43 | 237 11 | 261 40 | 285 30 | 309 27 | 334 11 |
|       | 19 0 19   | 28 14  | 57 52  | 88 16  | 118 9  | 146 31 |        |
| Dec.  | 1         |        |        |        |        |        | 173 9  |
|       | 3 198 25  | 222 49 | 246 46 | 270 30 | 294 15 | 318 15 | 342 54 |
|       | 17 8 45   | 36 19  | 61 41  | 97 11  | 126 46 | 155 37 | 182 29 |
|       | 31 207 42 |        |        |        |        |        |        |

Ayanamsa : 20° 54' 58"

## RAMAN'S EPHEMERIS

1894 A.D.

## Longitudes of Planets

| 1894    | Sun.   | Mars.  | Merc.   | Merc.   | Jupit. | Venus   | Saturn  | Rahu   |
|---------|--------|--------|---------|---------|--------|---------|---------|--------|
| Jan. 5  | 285 12 | 243 1  | 271 1   | 278 41  | 51 37R | 328 5   | 204 20  | 14 56  |
| 15      | 295 23 | 249 52 | 286 30  | 294 10  | 51 25  | 333 25  | 204 53  | 14 24  |
| 25      | 305 34 | 256 44 | 302 49  | 311 21  | 51 38D | 335 43  | 205 7   | 13 53  |
| Feb. 4  | 315 43 | 263 38 | 320 12  | 329 12  | 52 6   | 334 9R  | 205 11  | 13 21  |
| 14      | 325 50 | 270 34 | 338 16  | 346 44  | 52 55  | 328 52  | 205 3R  | 12 40  |
| 24      | 335 54 | 277 34 | 353 49  | 358 13  | 54 0   | 323 0   | 204 46  | 12 18  |
| March 8 | 345 56 | 284 30 | 359 0R  | 356 17R | 55 22  | 320 0R  | 204 19  | 11 46  |
| 16      | 355 54 | 291 35 | 351 44  | 347 44  | 56 56  | 320 57D | 203 45  | 11 14  |
| 26      | 5 40   | 298 39 | 345 49  | 346 10D | 58 42  | 325 13  | 403 4   | 10 42  |
| April 5 | 15 41  | 305 42 | 348 51D | 352 59  | 60 36  | 331 48  | 202 20  | 10 11  |
| 15      | 25 30  | 312 47 | 358 20  | 42      | 62 38  | 339 55  | 201 34  | 9 30   |
| 25      | 35 14  | 319 50 | 11 53   | 19 51   | 64 46  | 349 5   | 200 47  | 9 7    |
| May 5   | 44 57  | 326 53 | 28 39   | 38 10   | 66 58  | 358 59  | 200 5   | 8 35   |
| 15      | 54 36  | 333 50 | 48 25   | 59 15   | 69 16  | 9 25    | 199 28  | 8 4    |
| 25      | 64 13  | 340 47 | 70 10   | 80 40   | 71 34  | 20 11   | 199 0   | 7 31   |
| June 4  | 73 48  | 347 37 | 90 23   | 99 3    | 73 52  | 31 16   | 193 37  | 7 0    |
| 14      | 83 22  | 354 16 | 106 36  | 113 0   | 76 12  | 42 32   | 198 26  | 6 28   |
| 24      | 92 54  | 0 45   | 118 9   | 121 50  | 78 30  | 53 58   | 198 25D | 5 57   |
| July 4  | 102 26 | 7 0    | 123 52  | 124 1R  | 80 45  | 65 33   | 198 32  | 5 24   |
| 14      | 111 59 | 12 57  | 122 15R | 110 9   | 82 57  | 77 17   | 198 53  | 4 53   |
| 24      | 121 31 | 18 28  | 115 47  | 113 46  | 85 3   | 89 3    | 199 19  | 4 21   |
| Aug. 3  | 131 1  | 23 29  | 114 1   | 117 0D  | 87 4   | 101 0   | 199 53  | 3 49   |
| 13      | 140 41 | 27 50  | 122 35D | 130 24  | 88 57  | 112 59  | 200 38  | 3 17   |
| 23      | 150 18 | 31 20  | 139 36  | 149 21  | 90 42  | 125 7   | 201 30  | 2 46   |
| Sep. 2  | 159 58 | 33 48  | 159 15  | 168 40  | 92 15  | 137 20  | 202 27  | 2 14   |
| 12      | 169 41 | 34 58  | 177 39  | 186 10  | 93 36  | 149 36  | 203 30  | 1 42   |
| 22      | 179 27 | 34 45R | 194 16  | 201 57  | 94 42  | 161 56  | 204 37  | 1 10   |
| Oct. 2  | 189 17 | 33 7   | 207 15  | 216 12  | 95 33  | 174 20  | 205 47  | 0 39   |
| 12      | 199 9  | 30 18  | 222 37  | 228 25  | 96 6   | 186 48  | 206 58  | 0 7    |
| 22      | 209 5  | 27 1   | 233 12  | 236 22  | 96 21  | 199 18  | 208 11  | 359 35 |
| Nov. 1  | 219 5  | 24 2   | 236 54R | 233 43R | 97 14R | 213 50  | 209 23  | 359 3  |
| 11      | 229 7  | 22 1   | 227 27  | 222 9   | 95 48  | 224 24  | 210 34  | 358 32 |
| 21      | 239 12 | 21 21  | 221 12D | 224 18D | 95 3   | 236 58  | 211 42  | 358 0  |
| Dec. 1  | 249 20 | 21 58D | 229 47  | 231 1   | 96 3   | 249 32  | 212 48  | 357 28 |
| 11      | 259 29 | 23 47  | 243 36  | 251 1   | 97 40  | 262 7   | 213 48  | 356 56 |
| 21      | 269 40 | 26 33  | 258 40  | 266 21  | 98 30  | 274 41  | 214 43  | 356 26 |
| 31      | 279 51 | 30 1   | 274 12  | —       | 99 9   | 287 16  | 215 32  | 355 52 |

Ayanamsa: 20° 55' 48"

# RAMAN'S EPHEMERIS

9

## Longitude of the Moon

| 1894  | Sun. | Tue.   | Thur.  | Sat.   | Mon.   | Wed    | Fri.   |
|-------|------|--------|--------|--------|--------|--------|--------|
| Jan.  | 1    |        |        |        | 219 53 | 243 46 | 267 29 |
|       | 7    | 291 17 | 315 10 | 339 15 | 5 6    | 31 33  | 59 36  |
|       | 21   | 119 37 | 149 26 | 177 35 | 203 49 | 228 33 | 252 27 |
| Feb.  | 1    |        | 264 17 | 288 2  | 312 10 | 336 51 | 2 11   |
|       | 11   | 28 20  | 55 31  | 83 54  | 113 15 | 114 48 | 171 32 |
|       | 25   | 224 19 | 248 42 |        |        |        | 198 44 |
| March | 1    |        | 272 36 | 298 19 | 320 39 | 345 48 | 11 49  |
|       | 11   | 38 41  | 66 19  | 94 34  | 123 13 | 151 47 | 179 43 |
|       | 25   | 232 4  | 256 32 | 280 24 | 304 15 |        | 206 32 |
| April | 1    | 316 22 | 341 17 | 7 23   | 34 39  | 62 49  | 91 22  |
|       | 15   | 147 53 | 175 17 | 201 52 | 227 33 | 252 20 | 276 24 |
|       | 29   | 324 14 |        |        |        |        | 300 11 |
| May   | 1    |        | 349 11 | 15 33  | 43 27  | 72 31  | 101 54 |
|       | 13   | 158 32 | 185 17 | 211 7  | 236 13 | 260 40 | 284 38 |
|       | 27   | 332 33 | 357 14 | 23 53  |        |        |        |
| June  | 1    |        |        |        |        |        | 37 27  |
|       | 3    | 66 29  | 96 34  | 126 27 | 155 8  | 182 17 | 208 8  |
|       | 17   | 257 25 | 281 22 | 305 7  | 328 55 | 353 14 | 18 40  |
| July  | 1    | 74 51  | 105 14 | 135 35 | 164 42 | 192 0  | 217 45 |
|       | 15   | 268 29 | 290 16 | 314 2  | 337 58 | 2 25   | 27 51  |
|       | 29   | 83 33  | 113 41 |        |        |        | 54 49  |
| Aug.  | 1    |        |        |        |        | 128 56 | 158 56 |
|       | 5    | 187 25 | 214 5  | 239 14 | 263 27 | 287 14 | 311 1  |
|       | 19   | 359 31 | 24 44  | 51 1   | 78 39  | 107 39 | 137 30 |
| Sep   | 1    |        |        | 181 34 | 209 14 | 235 14 | 259 56 |
|       | 9    | 283 52 | 307 37 | 331 39 | 356 16 | 21 41  | 47 59  |
|       | 23   | 103 20 | 132 10 | 161 2  | 189 45 |        | 75 12  |
| Oct.  | 1    |        |        |        | 217 11 | 243 13 | 267 59 |
|       | 7    | 291 56 | 315 41 | 339 51 | 4 51   | 30 58  | 58 7   |
|       | 21   | 114 17 | 142 38 | 170 47 | 198 27 | 225 19 | 251 6  |
| Nov.  | 1    |        | 263 35 | 287 52 | 311 37 | 335 28 | 0 5    |
|       | 11   | 26 0   | 53 24  | 81 56  | 110 52 | 139 29 | 167 24 |
|       | 25   | 221 8  | 245 47 | 271 42 |        |        | 194 35 |
| Dec.  | 1    |        |        | 295 51 | 319 32 | 343 17 | 7 48   |
|       | 9    | 33 46  | 61 34  | 90 52  | 120 43 | 149 59 | 178 1  |
|       | 23   | 230 41 | 255 47 | 280 15 | 304 12 | 327 49 | 204 50 |

Ayanamsa : 20° 55' 48"



## Longitudes of Planets

| 1895  | Sun       | Mars   | Merc.   | Merc.   | Jupit. | Venus   | Saturn  | Rahu   |
|-------|-----------|--------|---------|---------|--------|---------|---------|--------|
| Jan.  | 5 284 57  | 32 3   | 292 10  | 290 16  | 89 29R | 293 32  | 215 53  | 355 37 |
|       | 13 295 8  | 36 25  | 298 36  | 307 7   | ■ 17   | 306 ■   | 216 28  | 355 5  |
|       | 25 305 10 | 41 10  | 315 46  | 324 57  | 87 21  | 318 30  | 216 54  | 354 33 |
| Feb.  | 4 315 28  | 46 13  | 332 16  | 338 41  | 86 40  | 331 10  | 217 10  | 354 1  |
|       | 14 325 35 | 51 31  | 342 7   | 341 20R | ■ 20   | 343 38  | 217 15  | 353 30 |
|       | 24 335 30 | 57 1   | 357 17R | 352 7   | ■ 19D  | 356 5   | 217 12R | 352 56 |
| March | 6 345 41  | 62 38  | 328 38  | 327 51D | 86 37  | 8 29    | 216 56  | 352 26 |
|       | 16 355 40 | 68 21  | 329 30D | 333 2   | 87 13  | 20 47   | 216 32  | 351 54 |
|       | 26 5 35   | 74 10  | 337 55  | 343 50  | 88 7   | 33 2    | 215 59  | 351 23 |
| April | 5 16 27   | 80 3   | 350 34  | 358 1   | 89 17  | 45 13   | 215 21  | 350 51 |
|       | 15 25 15  | 86 0   | 6 10    | 14 ■    | 90 41  | 57 18   | 214 36  | 350 19 |
|       | 25 35 0   | 91 50  | 24 28   | 34 36   | 92 17  | 69 13   | 213 52  | 340 47 |
| May   | 5 44 43   | 98 1   | 45 17   | 56 8    | 94 2   | 81 3    | 213 6   | 349 16 |
|       | 15 54 22  | 104 3  | ■ 33    | 76 7    | 95 56  | 92 45   | 212 24  | 348 43 |
|       | 25 63 59  | 110 7  | 84 30   | 91 34   | 97 56  | 104 18  | 211 46  | 348 12 |
| June  | 4 73 34   | 116 13 | 97 17   | 101 25  | 100 1  | 115 33  | 211 15  | 347 40 |
|       | 14 83 8   | 122 21 | 103 54  | 104 30R | 102 10 | 126 36  | 210 52  | 347 8  |
|       | 24 92 41  | 128 31 | 103 19  | 100 45  | 104 22 | 161 4   | 270 53  | 346 36 |
| July  | 4 102 13  | 134 41 | 97 46   | 95 39   | 106 34 | 147 33  | 210 34D | 346 5  |
|       | 14 111 45 | 140 53 | 95 20D  | 97 16   | 108 52 | 157 15  | 210 39  | 345 ■  |
|       | 24 121 18 | 147 7  | 101 28  | 107 51  | 111 5  | 166 4   | 270 53  | 345 1  |
| Aug.  | 3 130 51  | 153 23 | 116 6   | 125 41  | 113 18 | 173 48  | 211 17  | 344 29 |
|       | 13 140 27 | 159 41 | 135 53  | 145 58  | 115 27 | 179 48  | 211 50  | 343 53 |
|       | 23 150 4  | 166 3  | 155 42  | 164 54  | 117 34 | 183 23  | 212 32  | 343 26 |
| Sep.  | 2 159 44  | 172 25 | 173 32  | 181 43  | 119 31 | 183 37R | 213 20  | 342 54 |
|       | 12 169 27 | 178 53 | 180 25  | 196 36  | 121 26 | 180 1   | 214 16  | 342 ■  |
|       | 22 179 13 | 185 23 | 203 16  | 209 24  | 123 12 | 174 6   | 215 16  | 341 51 |
| Oct.  | 2 189 2   | 191 57 | 214 37  | 218 41R | 124 48 | 160 15  | 216 22  | 341 19 |
|       | 12 198 55 | 198 52 | 220 57R | 220 26  | 126 10 | 168 2D  | 217 30  | 340 47 |
|       | 22 208 51 | 205 12 | 216 27  | 210 18  | 127 19 | 170 34  | 218 40  | 340 15 |
| Nov.  | 1 218 50  | 211 57 | 205 53  | 205 57D | 128 13 | 176 1   | 219 52  | 339 44 |
|       | 11 228 52 | 218 44 | 200 52D | 216 1   | 128 50 | 183 33  | 221 1   | 339 12 |
|       | 21 238 58 | 225 35 | 223 11  | 230 48  | 129 7  | 192 28  | 222 16  | 338 40 |
| Dec.  | 1 249 5   | 232 22 | 238 34  | 246 21  | 129 6R | 202 20  | 223 26  | 338 3  |
|       | 11 259 14 | 239 33 | 254 8   | 261 37  | 128 45 | 212 54  | 224 29  | 337 37 |
|       | 21 269 25 | 246 35 | 260 52  | 277 52  | 128 4  | 223 57  | 225 31  | 337 5  |
|       | 31 279 37 | 253 43 | 285 58  | -       | 127 8  | 235 22  | 226 27  | 336 33 |

Ayanamsa : 20° 56' 30"

# RAMAN'S EPHEMERIS

11

## Longitude of the Moon

| 1895  | Sun.   | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|-------|--------|--------|--------|--------|--------|--------|--------|
| Jan.  | 1      | 339 37 | 3 35   | 28 35  | 55 18  | 83 59  | 114 8  |
|       | 144 31 | 173 51 | 201 34 | 227 45 | 252 40 | 277 10 | 301 4  |
|       | 324 43 | 348 22 | 12 25  |        |        |        |        |
| Feb.  | 1      |        |        |        |        |        | 24 44  |
|       | 3      | 50 22  | 77 44  | 106 56 | 137 20 | 167 40 | 196 44 |
|       | 17     | 249 42 | 274 12 | 298 4  | 321 42 | 345 25 | 9 3    |
| March | 1      |        |        |        |        |        | 34 14  |
|       | 3      | 59 58  | 87 5   | 116 42 | 145 30 | 175 33 | 204 46 |
|       | 17     | 258 17 | 282 51 | 306 39 | 330 16 | 354 10 | 18 40  |
|       | 31     | 70 12  |        |        |        |        | 43 59  |
| April | 1      |        |        |        | 83 41  | 111 23 | 140 2  |
|       | 7      | 169 16 | 198 25 | 226 41 | 253 30 | 278 49 | 302 59 |
|       | 21     | 350 26 | 14 56  | 40 25  | 66 56  | 94 18  | 326 38 |
| May   | 1      |        |        |        |        | 122 14 | 150 32 |
|       | 5      | 178 50 | 207 17 | 234 56 | 261 28 | 286 42 | 310 53 |
|       | 19     | 358 25 | 23 8   | 49 7   | 76 26  | 104 58 | 133 9  |
| June  | 1      |        |        | 175 32 | 203 18 | 230 30 | 258 57 |
|       | 9      | 282 25 | 306 53 | 330 40 | 354 20 | 18 34  | 44 1   |
|       | 23     | 99 42  | 128 57 | 158 2  | 186 22 |        | 71 9   |
| July  | 1      |        |        |        | 213 47 | 240 20 | 266 5  |
|       | 7      | 291 0  | 315 11 | 338 52 | 2 30   | 26 43  | 52 11  |
|       | 21     | 108 16 | 138 10 | 167 11 | 196 41 | 224 7  | 250 19 |
| Aug.  | 1      |        | 263 1  | 287 58 | 311 56 | 335 38 | 359 13 |
|       | 11     | 23 6   | 47 51  | 74 0   | 101 57 | 131 30 | 161 49 |
|       | 25     | 220 14 | 247 7  | 272 11 | 206 59 |        | 191 42 |
| Sep.  | 1      | 308 57 | 332 38 | 356 14 | 20 6   | 44 31  | 69 56  |
|       | 15     | 125 8  | 154 54 | 185 10 | 214 46 | 242 41 | 269 3  |
|       | 29     | 317 46 |        |        |        |        | 293 51 |
| Oct.  | 1      |        | 341 21 | 5 5    | 29 16  | 54 7   | 79 50  |
|       | 13     | 134 31 | 163 38 | 193 23 | 222 51 | 251 0  | 277 25 |
|       | 27     | 326 11 | 349 44 | 13 38  |        |        | 106 34 |
| Nov.  | 1      |        |        |        |        |        | 25 50  |
|       | 3      | 50 53  | 76 47  | 103 29 | 130 53 | 159 0  | 187 45 |
|       | 17     | 245 9  | 272 19 | 297 55 | 322 15 | 345 11 | 0 33   |
| Dec.  | 1      | 59 58  | 86 19  | 113 49 | 141 44 | 169 51 | 198 2  |
|       | 15     | 253 42 | 280 20 | 305 43 | 330 0  | 353 40 | 17 24  |
|       | 29     | 67 11  | 95 01  |        |        |        | 41 55  |

Ayanamsa : 20° 56' 30"

## Longitudes of Planets

|       | 1896 | Sun    | Mars   | Merc.   | More.   | Jupit.  | Venus  | Saturn  | Rahu   |
|-------|------|--------|--------|---------|---------|---------|--------|---------|--------|
| Jan.  | 5    | 284 42 | 257 18 | 294 ■   | 302 24  | 126 34R | 241 10 | 226 53  | 336 17 |
|       | 15   | 294 54 | 264 31 | 310 28  | 317 48  | 125 20  | 252 54 | 227 37  | 335 45 |
|       | 25   | 305 4  | 271 49 | 323 30  | 325 54  | 124 0   | 264 43 | 228 12  | 335 13 |
| Feb.  | 4    | 315 13 | 279 10 | 323 58R | 318 40R | 122 43  | 276 51 | 228 40  | 334 41 |
|       | 14   | 325 21 | 286 35 | 313 24  | 310 45  | 121 30  | 288 56 | 228 59  | 334 10 |
|       | 24   | 335 25 | 294 1  | 311 80  | 313 48D | 120 27  | 301 4  | 229 7   | 333 38 |
| March | 5    | 345 27 | 301 30 | 318 8   | 323 36  | 119 41  | 313 17 | 229 4R  | 333 6  |
|       | 15   | 355 26 | 309 6  | 329 55  | 336 56  | 119 14  | 325 31 | 228 51  | 332 35 |
|       | 25   | 5 21   | 316 30 | 344 33  | 352 45  | 119 5   | 337 45 | 228 29  | 332 2  |
| April | 4    | 15 15  | 324 14 | 1 32    | 10 54   | 119 16D | 349 59 | 227 59  | 331 31 |
|       | 14   | 25 2   | 331 50 | 20 53   | 31 24   | 119 44  | 2 15   | 227 22  | 330 59 |
|       | 24   | 34 47  | 339 28 | 42 2    | 52 19   | 120 39  | 14 30  | 226 40  | 330 27 |
| May   | 4    | 44 29  | 347 2  | 61 41   | 69 39   | 121 33  | 26 46  | 225 55  | 329 55 |
|       | 14   | 54 8   | 354 35 | 76 1    | 80 42   | 122 50  | 39 1   | 225 11  | 329 24 |
|       | 24   | 63 46  | 2 7    | 83 35   | 84 20   | 124 16  | 51 15  | 224 27  | 328 52 |
| June  | ■    | 73 20  | 9 32   | 83 34R  | 81 15R  | 125 56  | 63 30  | 223 50  | 328 20 |
|       | 13   | 82 54  | 16 53  | 78 31   | 76 27   | 127 40  | 75 46  | 223 17  | 327 48 |
|       | 23   | 92 27  | 24 9   | 75 57D  | 77 23D  | 129 34  | 88 1   | 228 51  | 327 17 |
| July  | 3    | 101 59 | 31 15  | 80 48   | 86 6    | 131 35  | 100 19 | 222 34  | 326 45 |
|       | 13   | 111 31 | 38 13  | 93 13   | 101 51  | 133 38  | 112 30 | 222 27  | 326 13 |
|       | 23   | 121 ■  | 44 58  | 111 43  | 122 11  | 135 46  | 124 58 | 222 20D | 325 41 |
| Aug.  | ■    | 130 37 | 51 32  | 132 34  | 142 33  | 137 53  | 137 15 | 222 42  | 325 10 |
|       | 12   | 140 13 | 57 50  | 151 58  | 160 46  | 140 5   | 149 34 | 223 1   | 324 38 |
|       | 22   | 149 50 | 63 47  | 168 57  | 176 36  | 142 18  | 161 57 | 223 35  | 324 6  |
| Sep.  | 1    | 159 30 | 69 25  | 183 40  | 190 3   | 144 26  | 174 17 | 224 13  | 323 34 |
|       | 11   | 169 13 | 74 36  | 195 40  | 200 25  | 146 35  | 186 40 | 224 59  | 323 3  |
|       | 21   | 178 59 | 79 13  | 203 42  | 204 59  | 148 39  | 199 1  | 225 53  | 322 31 |
| Oct.  | ■    | 188 48 | 83 10  | 203 25R | 198 50R | 150 37  | 211 22 | 226 52  | 321 59 |
|       | 11   | 198 40 | 86 22  | 193 ■   | 189 44  | 152 29  | 223 43 | 227 54  | 321 27 |
|       | 21   | 208 36 | 88 28  | 190 45D | 195 29D | 154 12  | 236 3  | 229 3   | 320 56 |
|       | 31   | 218 35 | 89 24  | 202 16  | —       | 155 48  | 248 20 | 230 13  | 320 24 |
| Nov.  | 10   | 228 38 | ■ 55R  | 218 0   | 226 2   | 157 12  | 260 36 | 231 23  | 319 52 |
|       | 20   | 238 43 | 87 1   | 234 2   | 241 57  | 158 21  | 272 52 | 232 36  | 319 20 |
|       | 30   | 248 50 | 83 52  | 249 49  | —       | 159 17  | 285 4  | 233 46  | 318 49 |
| Dec.  | 10   | 259 0  | 80 2   | 265 30  | 273 23  | 159 52  | 297 11 | 234 64  | 318 17 |
|       | 20   | 269 10 | 76 21  | 281 17  | 289 6   | 160 11  | 309 16 | 236 1   | 317 45 |
|       | 30   | 279 22 | 73 30  | 296 38  | —       | 160 11R | 321 10 | 237 4   | 317 13 |

Avanamsa : 20° 57' 29"

# RAMAN'S EPHEMERIS

13

## Longitude of the Moon

| 1896  | Sun. | Tue.   | Thur.  | Sat.   | Mon.   | Wed    | Fri.   |
|-------|------|--------|--------|--------|--------|--------|--------|
| Jan.  | 1    |        |        |        |        | 109 6  | 137 46 |
|       | 5    | 166 32 | 194 54 | 222 40 | 249 46 | 276 4  | 301 11 |
|       | 19   | 349 47 | 13 22  | 37 11  | 62 24  | 89 1   | 117 18 |
| Feb.  | 1    |        |        |        | 161 36 | 191 1  | 219 22 |
|       | 9    | 272 50 | 288 8  | 315 21 | 346 16 | 9 53   | 33 37  |
|       | 23   | 34 34  | 110 50 | 138 21 | 166 59 |        |        |
| March | 1    | 185 9  | 214 54 | 243 11 | 269 50 | 295 5  | 319 23 |
|       | 15   | 6 47   | 30 30  | 54 17  | 79 32  | 105 40 | 133 26 |
|       | 29   | 193 16 | 223 27 |        |        |        |        |
| April | 1    |        |        |        |        | 238 1  | 265 53 |
|       | 5    | 291 51 | 316 25 | 340 13 | 3 47   | 27 22  | 51 42  |
|       | 19   | 102 5  | 128 50 | 156 59 | 186 29 | 216 39 | 246 16 |
| May   | 1    |        |        |        |        |        | 274 17 |
|       | 3    | 300 11 | 325 2  | 348 18 | 12 25  | 36 21  | 60 55  |
|       | 17   | 112 15 | 139 9  | 167 3  | 195 57 | 225 24 | 254 30 |
|       | 31   | 308 29 |        |        |        |        |        |
| June  | 1    |        |        |        | 320 59 | 345 9  | 8 50   |
|       | 7    | 32 41  | 57 12  | 82 38  | 108 59 | 136 5  | 163 48 |
|       | 21   | 220 40 | 249 13 | 277 1  | 303 11 | 328 53 |        |
| July  | 1    |        |        |        |        | 353 4  | 16 48  |
|       | 5    | 40 44  | 65 26  | 91 18  | 118 19 | 146 14 | 174 38 |
|       | 19   | 231 20 | 259 5  | 286 2  | 311 59 | 336 55 | 1 1    |
| Aug.  | 1    |        |        |        | 36 39  | 60 55  | 86 16  |
|       | 9    | 141 13 | 170 18 | 199 14 | 228 10 | 255 53 | 282 33 |
|       | 23   | 333 8  | 357 10 | 21 6   | 44 50  | 69 3   |        |
| Sep.  | 1    |        | 81 30  | 107 38 | 135 7  | 164 20 | 194 22 |
|       | 13   | 252 35 | 279 33 | 305 13 | 329 55 | 354 2  | 17 50  |
|       | 27   | 65 29  | 90 3   |        |        |        |        |
| Oct.  | 1    |        |        | 115 49 | 143 11 | 172 28 | 202 55 |
|       | 11   | 211 10 | 289 15 | 314 11 | 339 6  | 2 57   | 24 40  |
|       | 25   | 74 35  | 99 10  | 124 34 | 151 59 |        |        |
| Nov.  | 1    | 166 11 | 195 48 | 226 19 | 256 20 | 284 42 | 311 5  |
|       | 15   | 359 53 | 11 31  | 47 21  | 71 37  | 96 11  | 121 46 |
|       | 29   | 175 43 |        |        |        |        |        |
| Dec.  | 1    |        | 204 42 | 234 35 | 264 17 | 292 40 | 319 15 |
|       | 13   | 8 15   | 31 57  | 55 54  | 80 27  | 105 11 | 131 47 |
|       | 27   | 186 14 | 214 42 | 243 42 |        |        |        |

Ayanamsa : 20° 57' 29"

# RAMAN'S EPHEMERIS Longitudes of Planets

1897 A.D.

| 1897  | Sun.      | Mars.  | Merc.   | Merc.   | Jupit.  | Venus  | Saturn  | Rahu   |
|-------|-----------|--------|---------|---------|---------|--------|---------|--------|
| Jan.  | 5 285 29  | 72 23R | 304 31  | 308 55  | 160 1R  | 328 14 | 237 11  | 316 54 |
|       | 15 295 40 | 71 36  | 309 59R | 312 28R | 159 31  | 330 54 | 238 28  | 316 31 |
|       | 25 305 50 | 72 7D  | 299 15  | 294 54  | 158 44  | 351 14 | 239 13  | 315 51 |
| Feb.  | 4 816 0   | 73 42  | 300 57D | 305 54D | 157 41  | 13     | 239 51  | 315 19 |
|       | 14 126 7  | 76 13  | 299 48  | 301 2   | 156 27  | 12 45  | 240 20  | 314 48 |
|       | 24 111 11 | 79 28  | 311 7   | —       | 155 8   | 22 33  | 240 38  | 314 18 |
| March | 6 346 13  | 83 16  | 325 8   | 332 57  | 153 51  | 31 25  | 240 46  | 313 11 |
|       | 16 356 11 | 87 31  | 341 16  | 350 4   | 152 39  | 38 52  | 240 44R | 313 12 |
|       | 26 6 6    | 92 6   | 359 26  | 9 19    | 151 38  | 44 20  | 240 33  | 312 41 |
| April | 1 15 58   | 97 0   | 19 31   | 30 1    | 150 52  | 46 53  | 240 12  | 312 9  |
|       | 15 46     | 102 5  | 39 54   | 43 37   | 150 24  | 45 39R | 239 43  | 311 37 |
|       | 25 35 31  | 107 21 | 55 40   | 60 46   | 150 12  | 40 44  | 239 7   | 311 5  |
| May   | 5 45 13   | 112 45 | 63 47   | 64 36R  | 150 20D | 34 40  | 238 26  | 310 33 |
|       | 15 54 52  | 118 19 | 63 28R  | 60 57   | 150 45  | 30 55  | 237 42  | 310 1  |
|       | 25 64 20  | 124 2  | 58 12   | 56 17   | 151 28  | 31 2D  | 236 58  | 309 31 |
| June  | 1 74 1    | 129 46 | 50 1D   | 57 35   | 152 26  | 34 35  | 235 15  | 308 57 |
|       | 14 83 37  | 135 11 | 60 57   | 65 56   | 153 38  | 40 37  | 235 34  | 308 26 |
|       | 24 93 10  | 141 30 | 72 27   | 80 23   | 155 1   | 48 18  | 235 1   | 307 11 |
| July  | 4 102 42  | 147 31 | 89 35   | 99 50   | 156 35  | 57 8   | 234 35  | 307 32 |
|       | 14 112 14 | 153 34 | 110 31  | 121 8   | 158 20  | 66 45  | 234 17  | 306 51 |
|       | 24 121 47 | 159 43 | 131 51  | 140 40  | 160 9   | 76 58  | 234 11  | 306 19 |
| Aug.  | 3 131 21  | 165 56 | 149 25  | 157 32  | 162 5   | 87 37  | 234 9D  | 305 47 |
|       | 13 140 56 | 172 13 | 164 54  | 171 37  | 164 8   | 98 38  | 234 21  | 305 16 |
|       | 23 150 34 | 178 36 | 177 33  | 182 33  | 166 13  | 109 55 | 234 40  | 304 43 |
| Sep.  | 2 160 14  | 185 2  | 186 15  | 188 16  | 168 22  | 121 24 | 235 10  | 304 12 |
|       | 12 169 57 | 191 34 | 177 55R | 184 50R | 170 31  | 133 8  | 235 47  | 303 40 |
|       | 22 179 43 | 198 10 | 179 42  | 175 8   | 172 41  | 145 0  | 235 35  | 303 11 |
| Oct.  | 2 189 33  | 204 50 | 173 42D | 176 32D | 174 49  | 157 4  | 237 27  | 302 36 |
|       | 12 199 26 | 211 36 | 182 32  | 190 10  | 176 55  | 170 28 | 238 23  | 302 11 |
|       | 22 209 22 | 218 27 | 198 26  | 206 53  | 178 55  | 181 30 | 239 77  | 301 33 |
| Nov.  | 1 219 21  | 225 22 | 215 12  | 223 22  | 180 57  | 193 83 | 240 34  | 301 1  |
|       | 11 229 24 | 232 25 | 231 21  | 239 15  | 182 48  | 206 19 | 241 42  | 300 29 |
|       | 21 239 20 | 239 31 | 247 11  | 254 46  | 184 31  | 218 41 | 242 52  | 299 58 |
| Dec.  | 1 249 37  | 246 42 | 262 23  | 269 57  | 186 3   | 231 20 | 244 4   | 299 26 |
|       | 11 259 46 | 253 57 | 277 20  | 284 10  | 187 24  | 243 53 | 245 15  | 298 54 |
|       | 21 269 57 | 261 19 | 289 56  | 293 28  | 188 31  | 256 26 | 256 26  | 298 22 |
|       | 31 280 9  | 268 44 | 292 58R | —       | 180 24  | 269 0  | 269 0   | 297 50 |

Ayanamsa: 20° 38' 19"

# RAMAN'S EPHEMERIS

## Longitude of the Moon

15

| 1807  | Sun. | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|-------|------|--------|--------|--------|--------|--------|--------|
| Jan.  | 1    |        |        |        |        |        | 258 12 |
|       | 3    | 286 46 | 313 54 | 331 30 | 4 11   | 28 2   | 51 51  |
|       | 17   | 101 29 | 127 49 | 155 7  | 183 4  | 211 23 | 239 44 |
|       | 31   | 205 21 |        |        |        |        | 267 51 |
| Feb.  | 1    |        |        |        | 308 44 | 334 49 | 359 47 |
|       | 7    | 23 56  | 47 42  | 71 41  | 96 11  | 122 36 | 150 8  |
|       | 21   | 207 49 | 236 35 | 264 33 | 291 33 |        |        |
| March | 1    |        |        |        | 317 51 | 343 14 | 7 54   |
|       | 7    | 31 57  | 55 41  | 79 36  | 104 18 | 130 23 | 158 13 |
|       | 21   | 217 33 | 246 59 | 275 7  | 303 51 | 327 26 | 352 15 |
| April | 1    |        |        | 28 30  | 52 16  | 76 1   | 100 10 |
|       | 11   | 125 20 | 152 8  | 180 50 | 211 3  | 241 32 | 270 55 |
|       | 25   | 324 32 | 349 22 | 13 31  |        |        | 298 33 |
| May   | 1    |        |        | 37 22  | 61 6   | 84 55  | 109 10 |
|       | 9    | 134 17 | 160 52 | 189 18 | 219 22 | 249 58 | 279 42 |
|       | 23   | 333 45 | 358 32 | 22 32  | 40 16  | 70 3   |        |
| June  | 1    |        | 82 1   | 106 16 | 131 10 | 157 3  | 184 22 |
|       | 13   | 243 15 | 273 17 | 302 12 | 329 22 | 354 54 | 19 16  |
|       | 27   | 60 50  | 90 56  |        |        |        | 43 4   |
| July  | 1    |        | 115 36 | 141 1  | 167 20 | 198 44 | 223 14 |
|       | 11   | 252 30 | 281 48 | 310 19 | 337 25 | 3 1    | 27 28  |
|       | 25   | 75 4   | 90 28  | 124 36 | 150 43 |        | 51 9   |
| Aug.  | 1    | 164 19 | 191 36 | 219 44 | 248 16 | 276 49 | 304 11 |
|       | 15   | 358 21 | 23 18  | 47 23  | 71 9   | 95 13  | 120 9  |
|       | 29   | 173 47 | 202 7  |        |        |        | 146 20 |
| Sep.  | 1    |        |        |        |        | 216 27 | 245 2  |
|       | 7    | 273 14 | 300 50 | 327 45 | 353 51 | 19 3   | 43 24  |
|       | 21   | 90 59  | 115 24 | 141 5  | 167 24 | 197 12 | 226 40 |
| Oct.  | 1    |        |        |        |        |        | 255 49 |
|       | 3    | 284 1  | 311 8  | 337 11 | 2 46   | 27 31  | 51 40  |
|       | 17   | 99 5   | 123 13 | 148 11 | 176 11 | 205 10 | 235 52 |
|       | 31   | 295 18 |        |        |        |        | 265 41 |
| Nov.  | 1    |        |        |        | 308 0  | 334 22 | 359 41 |
|       | 7    | 24 17  | 48 23  | 72 9   | 95 47  | 119 41 | 144 27 |
|       | 21   | 198 54 | 228 49 | 259 25 | 289 11 | 317 29 |        |
| Dec.  | 1    |        |        |        |        | 343 58 | 3 11   |
|       | 5    | 33 24  | 57 15  | 80 57  | 104 43 | 128 50 | 153 42 |
|       | 19   | 207 35 | 237 0  | 267 19 | 297 29 | 325 11 | 352 45 |

Ayanamea : 20° 58' 19"

## Longitudes of Planets

| 1898  | Sun       | Mars    | Mer.    | Mer.    | Jupit.  | Venus   | Saturn  | Rahu   |
|-------|-----------|---------|---------|---------|---------|---------|---------|--------|
| Jan.  | 5 285 14  | 272 50  | 283 57L | 281 33E | 189 43  | 275 17  | 248 0   | 297 35 |
|       | 15 295 25 | 280 2   | 277 59  | 278 6D  | 190 10  | 287 51  | 248 58  | 297 6  |
|       | 25 305 36 | 287 37  | 281 0E  | 283 11  | 190 17R | 300 26  | 249 51  | 296 31 |
| Feb.  | 4 315 45  | 295 17  | 291 21  | 297 48  | 190 5   | 312 59  | 250 11  | 295 59 |
|       | 14 325 52 | 302 59  | 304 47  | 312 12  | 189 36  | 325 31  | 251 16  | 295 27 |
|       | 24 335 56 | 310 45  | 320 3   | -       | 188 48  | 338 2   | 251 45  | 294 56 |
| March | 6 345 58  | 318 32  | 337 4   | 346 11  | 187 48  | 350 32  | 252 5   | 294 54 |
|       | 16 355 58 | 326 19  | 355 47  | 5 47    | 186 36  | 0       | 252 15  | 293 52 |
|       | 26 5 52   | 334 7   | 15 51   | 25 25   | 185 19  | 15 26   | 252 15R | 293 20 |
| April | 5 15 43   | 341 54  | 33 41   | 40 1    | 184 3   | 27 48   | 252 6   | 292 49 |
|       | 15 25 32  | 349 41  | 43 11   | 45 18   | 182 52  | 40 9    | 251 40  | 292 17 |
|       | 25 35 17  | 357 26  | 44 18R  | 41 38R  | 181 51  | 52 27   | 251 19  | 291 45 |
| May   | 5 44 59   | 5 8     | 38 31   | 11 16   | 181 4   | 64 42   | 250 44  | 291 15 |
|       | 15 54 38  | 12 47   | 39 41D  | 36 11   | 180 34  | 76 54   | 250 5   | 290 42 |
|       | 25 64 15  | 20 22   | 40 3    | 11 38   | 180 21  | 89 1    | 249 21  | 290 9  |
| June  | 4 73 50   | 27 51   | 50 24   | 57 11   | 180 27D | 101 10  | 248 37  | 289 14 |
|       | 14 83 24  | 35 16   | 56 4    | 75 30   | 180 49  | 113 12  | 247 54  | 288 6  |
|       | 24 92 56  | 42 34   | 85 52   | 96 42   | 181 29  | 125 10  | 247 14  | 288 35 |
| July  | 4 102 28  | 49 45   | 107 29  | 117 46  | 182 24  | 137 2   | 246 39  | 288 1  |
|       | 14 112 0  | 56 49   | 127 20  | 136 7   | 183 33  | 148 11  | 246 11  | 287 31 |
|       | 24 121 33 | 63 44   | 144 1   | 151 23  | 184 54  | 160 30  | 245 51  | 287 0  |
| Aug.  | 3 131 7   | 70 31   | 157 48  | 163 16  | 185 23  | 172 1   | 245 41  | 286 27 |
|       | 13 140 42 | 77 7    | 167 36  | 170 27  | 186 8   | 183 23  | 245 40D | 285 15 |
|       | 23 150 20 | 84 33   | 171 11  | 169 11E | 189 58  | 194 31  | 245 49  | 285 24 |
| Sep.  | 2 160 0   | 89 46   | 166 13R | 161 24  | 191 54  | 205 23  | 246 7   | 284 52 |
|       | 12 169 43 | 96 45   | 167 58  | 157 56D | 193 53  | 215 54  | 246 34  | 284 21 |
|       | 22 179 29 | 101 28  | 161 42D | 154 19  | 196 1   | 225 56  | 247 10  | 283 49 |
| Oct.  | 1 189 18  | 106 53  | 176 30  | 185 16  | 198 10  | 235 18  | 247 53  | 283 17 |
|       | 12 199 11 | 111 55  | 194 4   | 202 41  | 200 19  | 243 41  | 248 45  | 282 46 |
|       | 22 209 7  | 116 32  | 211 2   | 219 10  | 202 30  | 250 39  | 249 41  | 282 13 |
| Nov.  | 1 219 7   | 120 35  | 227 5   | 234 49  | 204 39  | 255 23  | 250 43  | 281 41 |
|       | 11 229 9  | 124 1   | 242 24  | 249 50  | 206 46  | 257 13  | 251 49  | 281 10 |
|       | 21 239 13 | 126 37  | 257 4   | 263 58  | 208 49  | 255 5R  | 252 57  | 280 38 |
| Dec.  | 1 249 22  | 128 14  | 270 11  | 275 15  | 210 41  | 249 43  | 254 1   | 280 1  |
|       | 11 259 31 | 128 40R | 277 11  | 276 24R | 212 39  | 244 16  | 255 18  | 279 35 |
|       | 21 269 42 | 127 45  | 270 42R | 274 29  | 214 1   | 241 57  | 256 10  | 279 1  |
|       | 31 279 54 | 125 29  | 261 11  | -       | 216 55  | 243 36D | 257 38  | 278 30 |

Ayanamsa : 20° 59' 10"



# RAMAN'S EPHEMERIS

17

## Longitude of the Moon

| 1898  | Sun. | Tue.   | Thur.  | Sat.   | Mon.   | Wed    | Fri.   |
|-------|------|--------|--------|--------|--------|--------|--------|
| Jan.  | 1    |        |        | 30 12  | 54 6   | 77 46  | 101 35 |
|       | 9    | 125 50 | 150 45 | 176 32 | 203 26 | 231 34 | 260 47 |
|       | 23   | 319 37 | 347 28 | 13 41  | 38 29  | 62 24  | 290 27 |
| Feb.  | 1    | 74 13  | 97 58  | 122 15 | 147 21 | 173 25 | 200 21 |
|       | 13   | 228 1  | 256 18 | 284 58 | 313 37 | 341 40 | 34 4   |
|       | 27   | 58 24  |        |        |        |        |        |
| March | 1    | 82 8   | 105 54 | 130 22 | 156 00 | 182 51 | 210 40 |
|       | 13   | 238 56 | 267 14 | 295 20 | 323 6  | 350 19 | 16 40  |
|       | 27   | 66 14  | 89 57  | 113 42 |        |        | 41 57  |
| April | 1    |        |        |        |        |        | 125 50 |
|       | 3    | 150 59 | 177 40 | 205 50 | 234 51 | 263 51 | 292 14 |
|       | 17   | 346 37 | 12 41  | 37 58  | 62 23  | 86 12  | 109 48 |
| May   | 1    | 158 56 | 185 45 | 214 19 | 244 2  | 273 48 | 302 41 |
|       | 15   | 358 43 | 22 11  | 46 54  | 70 59  | 94 39  | 118 14 |
|       | 29   | 167 19 | 194 1  |        |        |        | 142 15 |
| June  | 1    |        |        |        |        | 208 4  | 237 26 |
|       | 5    | 267 44 | 297 43 | 326 26 | 353 34 | 19 17  | 43 58  |
|       | 19   | 91 38  | 115 14 | 139 11 | 163 40 | 189 26 | 216 49 |
| July  | 1    |        |        |        |        |        | 245 52 |
|       | 3    | 276 4  | 306 16 | 333 23 | 2 11   | 28 33  | 53 4   |
|       | 17   | 100 28 | 124 11 | 148 22 | 173 16 | 199 10 | 226 22 |
|       | 31   | 284 35 |        |        |        |        | 254 56 |
| Aug.  | 1    |        |        |        | 209 35 | 329 17 | 357 44 |
|       | 7    | 24 28  | 49 36  | 73 39  | 97 15  | 120 58 | 145 14 |
|       | 21   | 196 11 | 222 58 | 250 41 | 279 16 | 308 27 | 337 36 |
| Sep.  | 1    |        | 351 53 | 19 24  | 45 20  | 69 53  | 93 38  |
|       | 11   | 117 17 | 141 28 | 166 36 | 192 47 | 219 51 | 247 31 |
|       | 25   | 303 56 | 332 22 | 0 22   |        |        | 275 35 |
| Oct.  | 1    |        |        | 27 29  | 53 15  | 77 45  | 101 30 |
|       | 11   | 125 11 | 149 59 | 174 59 | 201 11 | 229 11 | 258 11 |
|       | 23   | 314 42 | 342 28 | 9 36   | 35 58  | 61 18  | 280 35 |
| Nov.  | 1    | 73 23  | 97 33  | 121 11 | 145 1  | 169 54 | 196 17 |
|       | 13   | 224 17 | 253 22 | 282 40 | 311 51 | 339 19 | 6 14   |
|       | 27   | 57 28  | 81 52  |        |        |        | 32 16  |
| Dec.  | 1    |        | 105 41 | 129 16 | 153 7  | 177 52 | 204 8  |
|       | 11   | 232 11 | 261 11 | 291 49 | 321 21 | 349 35 | 16 23  |
|       | 25   | 66 32  | 90 32  | 114 13 | 137 50 |        | 41 55  |

Ayanamsa : 20° 59' 10"

## Longitudes of Planets

| 1899  | Sun       | Mars    | Merc.   | Merc.   | Jupit.  | Venus  | Saturn  | Rahu   |
|-------|-----------|---------|---------|---------|---------|--------|---------|--------|
| Jan.  | ■ 284 59  | 123 53R | 262 49  | 266 34  | 216 37  | 245 42 | 258 11  | 278 15 |
|       | 15 295 11 | 120 7   | 271 52  | 278 ■   | 217 52  | 251 49 | 259 15  | 277 43 |
|       | 25 305 21 | 116 9   | 284 48  | 291 58  | 218 53  | 259 45 | 260 14  | 277 11 |
| Feb.  | ■ 315 30  | 112 46  | 299 30  | 307 21  | 219 32  | 268 54 | 261 ■   | 276 39 |
|       | 14 325 37 | 110 28  | 315 32  | 324 6   | 220 4   | 278 53 | 261 55  | 276 ■  |
|       | 24 335 42 | 109 28  | 333 3   | 342 23  | 220 12  | 89 28  | 262 34  | 275 36 |
| March | 6 345 43  | 109 44D | 352 2   | 1 43    | 220 2R  | 300 24 | 263 5   | 275 ■  |
|       | 16 355 42 | 111 6   | 10 53   | 18 ■    | 219 34  | 311 39 | 263 27  | 274 ■  |
|       | 26 5 37   | 113 24  | 24 6    | 26 40   | 218 48  | 323 ■  | 263 39  | 274 1  |
| April | 5 15 29   | 116 24  | 26 16R  | 23 32R  | 217 48  | 334 43 | 263 40R | 273 29 |
|       | 15 25 18  | 120 2   | 19 53   | 16 56   | 216 38  | 346 27 | 263 33  | 272 57 |
|       | 25 35 1   | 124 7   | 15 45   | 16 36D  | 215 23  | 358 15 | 263 15  | 272 25 |
| May   | 5 44 45   | 128 34  | 19 17   | 23 31   | 214 ■   | 10 ■   | 262 49  | 271 54 |
|       | 15 54 25  | 133 22  | 29 8    | 35 40   | 212 55  | 22 4   | 262 16  | 271 22 |
|       | 25 64 2   | 138 23  | 43 18   | 51 55   | 211 54  | 34 ■   | 261 37  | 270 50 |
| June  | 4 73 37   | 143 38  | 61 30   | 71 54   | 211 6   | 46 4   | 260 55  | 270 18 |
|       | 14 83 10  | 149 ■   | 82 49   | 93 42   | 210 34  | 58 7   | 260 11  | 269 46 |
|       | 24 92 43  | 154 41  | 104 6   | 113 43  | 210 20D | 79 12  | 259 27  | 269 15 |
| July  | 4 102 15  | 180 26  | 122 28  | 131 49  | 210 23  | 81 20  | 258 46  | 268 43 |
|       | 14 111 47 | 166 20  | 137 20  | 144 24  | 210 45  | 94 30  | 258 11  | 268 11 |
|       | 24 121 19 | 172 20  | 148 12  | 151 43  | 211 22  | 106 43 | 257 42  | 267 40 |
| Aug.  | 3 130 53  | 178 29  | 153 33  | 153 19R | 212 17  | 118 59 | 257 20  | 267 8  |
|       | 13 140 29 | 184 ■   | 150 55R | 146 54  | 213 25  | 137 17 | 257 8   | 266 36 |
|       | 23 150 ■  | 191 6   | 142 54  | 140 56  | 214 46  | 143 38 | 257 5D  | 266 ■  |
| Sep.  | 2 159 46  | 197 35  | 142 14D | 146 53  | 216 18  | 156 2  | 257 11  | 265 32 |
|       | 12 169 29 | 204 11  | 154 6   | 162 47  | 218 0   | 168 27 | 257 28  | 265 1  |
|       | 22 179 15 | 210 52  | 172 0   | 181 11  | 219 51  | 180 54 | 257 53  | 264 29 |
| Oct.  | 2 189 ■   | 217 41  | 190 5   | 198 40  | 221 49  | 193 22 | 258 27  | 263 57 |
|       | 12 198 57 | 224 ■   | 206 55  | 214 52  | 223 ■   | 205 52 | 259 10  | 263 ■  |
|       | 22 208 53 | 231 38  | 222 34  | 220 2   | 225 59  | 218 21 | 259 59  | 262 54 |
| Nov.  | 1 218 52  | 238 45  | 237 14  | 244 ■   | 228 10  | 230 51 | 260 55  | 262 21 |
|       | 11 228 54 | 245 59  | 250 35  | 256 14  | 230 ■   | 243 21 | 261 56  | 261 50 |
|       | 21 238 59 | 253 19  | 260 23  | 262 6   | 232 35  | 255 51 | 263 0   | 261 18 |
| Dec.  | 1 249 7   | 260 44  | 259 42R | 253 17R | 234 47  | 268 21 | 264 9   | 260 46 |
|       | 11 259 17 | 268 15  | 247 40  | 245 50  | 235 56  | 281 51 | 265 19  | 260 15 |
|       | 21 ■ 26   | 275 50  | 247 57D | 252 ■   | 239 2   | 291 19 | 266 30  | 259 41 |
|       | 31 279 39 | 283 29  | 258 22  | —       | 241 3   | 305 46 | 267 43  | 259 11 |

Ayanamsa: 21° 0' 0"

# RAMAN'S EPHEMERIS.

19

## Longitude of the Moon

|       | 1899 | Sun.   | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|-------|------|--------|--------|--------|--------|--------|--------|--------|
| Jan.  | 1    | 149 44 | 173 59 | 199 17 | 226 6  | 254 41 | 284 42 | 315 8  |
|       | 15   | 334 44 | 12 39  | 38 45  | 63 36  | 87 33  | 111 10 | 134 41 |
|       | 29   | 158 46 | 183 17 |        |        |        |        |        |
| Feb.  | 1    |        |        |        |        |        | 195 47 | 221 44 |
|       | 5    | 249 0  | 277 50 | 307 52 | 331 6  | 7 16   | 34 37  | 60 9   |
|       | 19   | 84 23  | 108 1  | 131 38 | 155 39 | 180 18 |        |        |
| March | 1    |        |        |        |        |        | 205 39 | 231 48 |
|       | 5    | 258 56 | 287 13 | 316 32 | 346 13 | 15 13  | 42 38  | 68 18  |
|       | 19   | 92 38  | 116 17 | 139 59 | 164 16 | 188 25 | 215 26 | 242 11 |
| April | 1    |        |        |        | 255 49 | 283 34 | 311 57 | 340 45 |
|       | 9    | 9 25   | 37 11  | 63 32  | 88 27  | 112 25 | 136 5  | 160 11 |
|       | 23   | 185 7  | 211 15 | 238 25 | 266 18 |        |        |        |
| May   | 1    |        |        |        |        | 294 31 | 322 50 | 351 2  |
|       | 7    | 18 48  | 45 45  | 71 36  | 96 20  | 120 11 | 143 58 | 168 4  |
|       | 21   | 193 9  | 219 37 | 247 26 | 276 10 | 305 9  | 333 48 |        |
| June  | 1    |        |        | 347 52 | 15 23  | 41 59  | 67 39  | 92 11  |
|       | 11   | 116 31 | 140 13 | 164 1  | 188 30 | 214 14 | 241 34 | 270 25 |
|       | 25   | 300 10 | 329 47 | 358 27 |        |        |        |        |
| July  | 1    |        |        |        | 25 47  | 51 51  | 76 53  | 101 11 |
|       | 9    | 125 2  | 148 42 | 172 31 | 196 58 | 222 33 | 249 45 | 278 42 |
|       | 23   | 308 52 | 339 9  | 8 18   | 35 45  | 61 34  |        |        |
| Aug.  | 1    |        | 73 60  | 98 14  | 122 11 | 145 42 | 169 29 | 193 40 |
|       | 13   | 218 36 | 244 45 | 272 33 | 302 1  | 325 31 | 2 42   | 31 21  |
|       | 27   | 58 11  | 83 9   | 107 14 |        |        |        |        |
| Sep.  | 1    |        |        |        |        |        |        | 119 11 |
|       | 3    | 142 44 | 166 34 | 190 11 | 215 35 | 241 11 | 267 40 | 296 10 |
|       | 17   | 325 48 | 350 1  | 25 32  | 53 22  | 79 20  | 103 53 | 127 40 |
| Oct.  | 1    | 151 21 | 175 23 | 200 1  | 225 17 | 251 22 | 278 16 | 306 13 |
|       | 15   | 335 10 | 4 38   | 33 38  | 61 18  | 87 11  | 111 57 | 135 41 |
|       | 29   | 159 33 | 183 46 |        |        |        |        |        |
| Nov.  | 1    |        |        |        |        |        | 196 10 | 221 39 |
|       | 5    | 248 11 | 275 11 | 302 57 | 331 14 | 359 48 | 28 11  | 55 51  |
|       | 19   | 119 19 | 107 31 | 131 11 | 155 30 | 179 11 | 203 8  |        |
| Dec.  | 1    |        |        |        |        |        |        | 230 0  |
|       | 3    | 257 7  | 285 11 | 313 41 | 342 17 | 10 11  | 37 57  | 66 48  |
|       | 17   | 90 30  | 115 25 | 139 35 | 163 20 | 187 14 | 211 51 | 237 47 |
|       | 31   | 265 18 |        |        |        |        |        |        |

Ayanamsa : 21° 0' 0"

## Longitudes of Planets

| 1900  | Sun       | Mars   | Merc.   | Merc.   | Jupit.  | Venus   | Saturn  | Rahu   |
|-------|-----------|--------|---------|---------|---------|---------|---------|--------|
| Jan.  | 5 224 11  | 287 20 | 264 59  | 272 1   | 242 0   | 311 58  | 268 14  | 258 55 |
|       | 15 294 56 | 295 8  | 279 22  | 288 58  | 243 50  | 324 21  | 269 22  | 258 23 |
|       | 25 305 6  | 302 54 | 294 42  | 298 11  | 245 31  | 336 42  | 270 27  | 257 51 |
| Feb.  | 4 315 16  | 310 45 | 311 20  | 320 8   | 247 1   | 348 57  | 271 26  | 257 20 |
|       | 14 325 23 | 318 37 | 322 5   | 338 21  | 248 19  | 1 7     | 272 21  | 256 54 |
|       | 24 335 27 | 326 30 | 347 37  | 356 19  | 249 21  | 13 8    | 273 7   | 256 16 |
| March | 6 345 29  | 334 23 | 3 29    | 0       | 250 10  | 25 0    | 273 50  | 255 44 |
|       | 16 355 18 | 342 16 | 9 6R    | 6 11R   | 250 49  | 36 41   | 274 7   | 255 13 |
|       | 26 5 23   | 350 7  | 2 51    | 358 56  | 250 52  | 48 7    | 274 45  | 254 41 |
| April | 5 15 15   | 357 56 | 356 46  | 356 51D | 250 45R | 59 16   | 274 59  | 254 1  |
|       | 15 25 4   | 5 41   | 358 59  | 2 47    | 250 20  | 70 1    | 275 2R  | 253 37 |
|       | 25 34 11  | 13 21  | 7 54    | 14 5    | 249 38  | 80 16   | 274 56  | 253 8  |
| May   | 5 44 31   | 21 2   | 21 11   | 29 0    | 248 41  | 89 51   | 274 41  | 252 34 |
|       | 15 54 11  | 28 35  | 37 56   | 47 34   | 247 32  | 98 31   | 274 17  | 252 1  |
|       | 25 63 48  | 36 4   | 57 57   | 58 51   | 246 18  | 105 50  | 273 45  | 251 30 |
| June  | 4 73 22   | 43 27  | 79 47   | 69 13   | 245 1   | 111 15  | 273 7   | 250 59 |
|       | 14 82 56  | 50 53  | 99 50   | 108 28  | 243 49  | 113 53R | 272 25  | 250 27 |
|       | 24 92 29  | 57 56  | 116 11  | 122 38  | 242 46  | 112 52  | 271 41  | 249 55 |
| July  | 4 102 1   | 65 3   | 128 3   | 132 7   | 241 55  | 108 14  | 270 58  | 249 24 |
|       | 14 111 33 | 72 1   | 134 36  | 135 13R | 241 20  | 102 9   | 270 16  | 248 50 |
|       | 24 121 5  | 78 53  | 133 49R | 130 44  | 241 3   | 98 7    | 269 39  | 248 20 |
| Aug.  | 4 130 39  | 85 38  | 127 2   | 124 21  | 241 4D  | 97 52D  | 269 9   | 247 48 |
|       | 13 140 15 | 92 16  | 124 1D  | 126 38  | 241 22  | 101 5   | 268 45  | 247 16 |
|       | 23 149 52 | 98 47  | 132 6   | 139 12  | 241 59  | 106 53  | 268 31  | 246 44 |
| Sep.  | 4 159 32  | 105 9  | 149 0   | 153 37  | 242 52  | 114 30  | 268 26D | 246 10 |
|       | 14 169 15 | 111 23 | 168 10  | 177 22  | 244 0   | 123 21  | 268 31  | 245 40 |
|       | 24 179 0  | 117 28 | 186 10  | 194 33  | 245 21  | 133 4   | 268 45  | 245 0  |
| Oct.  | 2 188 50  | 123 22 | 202 11  | 210 14  | 246 54  | 143 27  | 269 9   | 244 37 |
|       | 12 198 42 | 129 1  | 217 34  | 224 33  | 248 38  | 154 20  | 269 42  | 244 5  |
|       | 22 208 31 | 134 33 | 231 6   | 237 4   | 250 31  | 165 37  | 270 23  | 243 34 |
| Nov.  | 1 218 37  | 139 11 | 249 5   | 254 28R | 252 31  | 177 12  | 271 11  | 243 1  |
|       | 11 228 39 | 144 40 | 246 7R  | 242 50R | 254 37  | 189 1   | 272 6   | 242 30 |
|       | 21 238 45 | 149 12 | 236 26  | 231 12R | 254 48  | 201 1   | 273 6   | 241 68 |
| Dec.  | 1 248 52  | 153 17 | 230 20D | 233 21  | 259 2   | 213 10  | 274 10  | 241 11 |
|       | 11 259 1  | 158 47 | 234 37  | 245 3   | 262 26  | 225 25  | 275 16  | 240 55 |
|       | 21 269 12 | 169 37 | 252 4   | 259 11  | 263 35  | 237 45  | 276 22  | 240 23 |
|       | 31 279 11 | 181 34 | 269 55  | -       | 265 51  | 250 0   | 277 39  | 239 51 |

Ayanamsa : 11° 0' 50"

## Longitude of the Moon

| 1900    | Sun    | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  |        |        |        |        | 279 37 | 308 59 | 338 28 |
| 7       | 7 14   | 34 50  | ■ 1 18 | ■ 48   | 111 37 | 135 50 | 159 41 |
| 21      | 183 25 | 207 30 | 232 32 | 259 6  | 287 32 | 317 28 |        |
| Feb. 1  |        |        | 332 40 | 2 42   | 31 20  | 58 18  | 83 2   |
| 11      | 108 30 | 132 36 | 150 27 | 180 12 | 204 ■  | 228 32 | 254 ■  |
| 25      | 281 15 | 310 22 |        |        |        |        |        |
| March 1 |        |        | 340 50 | 11 19  | 40 28  | 67 42  | 93 15  |
| 11      | 117 40 | 141 34 | 165 18 | 189 8  | 213 15 | 237 53 | 263 37 |
| 25      | 290 24 | 319 3  | 349 5  | 19 26  |        |        |        |
| April 1 | 34 18  | 62 45  | 89 19  | 114 20 | 138 25 | 162 9  | 185 59 |
| 15      | 210 12 | 234 57 | 260 26 | 286 52 | 314 31 | 343 23 | 13 1   |
| 29      | 42 27  |        |        |        |        |        |        |
| May 1   |        | 70 44  | 97 24  | 122 34 | 146 44 | 170 30 | 194 26 |
| 13      | 218 56 | 244 13 | 270 23 | 297 25 | 325 17 | 353 48 | 22 37  |
| 27      | 51 10  | 78 52  | 105 19 |        |        |        |        |
| June 1  |        |        |        |        |        |        | 118 ■  |
| 3       | 142 41 | 166 38 | 190 27 | 214 44 | 239 57 | 266 20 | 293 48 |
| 17      | 322 2  | 350 32 | 18 56  | 46 54  | 74 13  | 100 39 | 126 7  |
| July 1  | 150 39 | 174 34 | 198 22 | 222 39 | 248 3  | 274 54 | 303 12 |
| 15      | 332 19 | 1 26   | 29 51  | 57 18  | 83 15  | 109 36 | 134 35 |
| 29      | 158 54 | 182 43 |        |        |        |        |        |
| Aug. 1  |        |        |        |        |        | 194 34 | 218 27 |
| 5       | 243 9  | 269 19 | 297 17 | 326 46 | 356 48 | 26 11  | 54 13  |
| 19      | 80 52  | 106 27 | 131 17 | 155 33 | 179 24 | 203 ■  | 226 54 |
| Sep. 1  |        |        |        | 239 4  | 264 18 | 291 15 | 320 ■  |
| 9       | 350 27 | 20 52  | 50 5   | 77 36  | 103 32 | 128 23 | 152 34 |
| 23      | 176 23 | 200 5  | 223 51 | 248 4  |        |        |        |
| Oct. 1  |        |        |        |        | 273 15 | 299 58 | 328 33 |
| 7       | 358 40 | 29 12  | 58 48  | 86 11  | 112 44 | 137 37 | 161 31 |
| 21      | 185 14 | 208 58 | 233 0  | 257 33 | 282 57 | 309 35 |        |
| Nov. 1  |        |        | 323 27 | 352 ■  | 22 13  | 52 ■   | 81 1   |
| 11      | 108 12 | 133 46 | 158 8  | 181 54 | 205 37 | 220 43 | 254 27 |
| 25      | 279 59 | 306 26 | 333 50 |        |        |        |        |
| Dec. 1  |        |        |        | 2 11   | 31 13  | 60 20  | 88 49  |
| 9       | 116 0  | 141 42 | 166 11 | 189 58 | 210 11 | 238 0  | 263 14 |
| ■       | 289 33 | 316 50 | 344 ■  | 12 57  | 41 15  |        |        |

Ayanamsa: 21° 0' 50"

# RAMAN'S EPHEMERIS

## Longitudes of Planets

1901 A.D.

|       | 1901 | Sun    | Mars   | Mer.    | Mer.    | Jupit.  | Venus  | Saturn  | Rahu   |
|-------|------|--------|--------|---------|---------|---------|--------|---------|--------|
| Jan.  | 5    | 294 30 | 168 11 | 274 36  | 282 27  | 266 58  | 256 21 | 278 14  | 239 36 |
|       | 15   | 294 41 | 162 31 | 290 29  | 288 43  | 269 10  | 258 47 | 279 24  | 239 36 |
|       | 25   | 294 52 | 161 34 | 307 12  | 315 55  | 271 18  | 281 15 | 280 33  | 239 32 |
| Feb.  | 4    | 295 1  | 159 19 | 324 48  | 333 50  | 273 20  | 293 43 | 281 37  | 239 0  |
|       | 14   | 295 8  | 155 50 | 341 46  | 348 15  | 275 15  | 306 11 | 282 38  | 237 28 |
|       | 24   | 335 13 | 152 4  | 351 46  | 351 23R | 277 1   | 318 39 | 283 34  | 236 56 |
| March | 6    | 345 15 | 148 18 | 357 39R | 342 45  | 278 37  | 331 6  | 284 33  | 236 24 |
|       | 16   | 355 13 | 145 20 | 339 12  | 338 8D  | 280 0   | 343 1  | 285 4   | 235 53 |
|       | 26   | 5 9    | 143 33 | 339 27  | 342 39  | 281 10  | 355 33 | 285 35  | 235 31 |
| April | 5    | 15 39  | 143 4D | 347 19  | 353 3   | 282 4   | 8 22   | 286 3   | 234 50 |
|       | 15   | 24 49  | 143 45 | 359 42  | 7 8     | 282 41  | 20 45  | 286 18  | 234 18 |
|       | 25   | 34 35  | 145 33 | 15 7    | 24 10   | 283 1   | 33 7   | 286 24  | 233 46 |
| May   | 5    | 44 17  | 148 10 | 33 47   | 44 6    | 283 1R  | 43 7   | 286 19R | 233 15 |
|       | 15   | 53 56  | 151 29 | 54 11   | 55 46   | 282 48  | 57 45  | 286 6   | 232 42 |
|       | 25   | 63 34  | 153 22 | 76 11   | 76 42   | 282 7   | 70 5   | 285 43  | 232 10 |
| June  | 4    | 73 9   | 159 42 | 94 6    | 101 18  | 281 15  | 82 21  | 285 13  | 231 38 |
|       | 14   | 82 42  | 164 26 | 107 15  | 111 48  | 280 11  | 94 37  | 284 23  | 231 6  |
|       | 24   | 92 15  | 169 29 | 114 48  | 115 59  | 278 58  | 106 53 | 283 55  | 230 35 |
| July  | 4    | 101 47 | 174 49 | 115 16R | 112 55R | 277 41  | 119 7  | 283 11  | 230 4  |
|       | 14   | 111 19 | 180 23 | 109 43  | 106 59  | 276 28  | 131 20 | 282 28  | 229 11 |
|       | 24   | 120 52 | 186 10 | 105 57  | 107 16D | 275 19  | 143 23 | 281 45  | 229 0  |
| Aug.  | 3    | 130 25 | 192 9  | 111 8   | 117 24  | 274 23  | 155 43 | 281 7   | 228 38 |
|       | 13   | 140 31 | 198 19 | 125 38  | 135 9   | 273 42  | 167 52 | 280 35  | 227 56 |
|       | 23   | 149 23 | 204 39 | 145 1   | 155 3   | 273 19  | 179 55 | 280 10  | 227 25 |
| Sep.  | 2    | 159 18 | 211 9  | 154 33  | 173 33  | 273 14D | 192 1  | 279 54  | 226 50 |
|       | 12   | 169 0  | 219 47 | 182 4   | 190 8   | 273 28  | 214 3  | 279 47  | 226 21 |
|       | 22   | 178 46 | 224 34 | 197 46  | 204 59  | 274 1   | 216 0  | 278 50D | 225 51 |
| Oct.  | 2    | 187 36 | 231 30 | 211 44  | 217 55  | 274 52  | 227 51 | 280 1   | 225 15 |
|       | 12   | 198 28 | 238 33 | 223 22  | 227 41  | 275 58  | 239 39 | 280 25  | 224 45 |
|       | 22   | 208 27 | 245 44 | 230 9   | 229 46R | 277 19  | 251 19 | 280 57  | 224 14 |
| Nov.  | 1    | 218 22 | 253 2  | 225 43  | 219 22R | 278 53  | 262 50 | 251 37  | 223 42 |
|       | 11   | 228 25 | 260 27 | 214 57  | 218 4D  | 280 38  | 274 9  | 252 24  | 223 11 |
|       | 21   | 238 30 | 267 58 | 218 56  | 224 54  | 282 33  | 285 11 | 253 18  | 222 39 |
| Dec.  | 1    | 248 37 | 275 34 | 211 58  | 239 17  | 284 35  | 295 49 | 275 34  | 222 7  |
|       | 11   | 258 47 | 283 15 | 246 52  | 254 34  | 286 45  | 305 54 | 285 22  | 221 36 |
|       | 21   | 268 57 | 291 1  | 262 20  | 270 10  | 288 59  | 316 9  | 286 29  | 221 1  |
|       | 31   | 279 1  | 198 50 | 278 7   | -       | 291 17  | 323 11 | 287 39  | 220 31 |

Ayanamasa: 21° 1' 41"

## Longitude of the Moon

| 1901    | Sun.   | Tue.   | Thurs. | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  |        | 55 24  | 82 20  | 110 36 | 138 48 | 161 49 | 185 45 |
| 13      | 209 34 | 233 32 | 258 25 | 284 42 | 312 13 | 340 58 | 9 43   |
| 27      | 33 8   | 65 47  | 92 54  |        |        |        |        |
| Feb. 1  |        |        |        |        |        |        | 106 13 |
| 8       | 132 17 | 157 60 | 181 52 | 205 37 | 229 17 | 253 34 | 279 11 |
| 17      | 306 35 | 335 28 | 5 7    | 34 25  | 62 41  | 89 49  |        |
| March 1 |        |        |        |        |        |        | 115 29 |
| 3       | 141 23 | 165 5  | 190 10 | 213 50 | 237 11 | 261 43 | 287 12 |
| 17      | 314 30 | 343 38 | 13 50  | 43 51  | 72 39  | 99 55  | 125 51 |
| 31      | 150 47 |        |        |        |        |        |        |
| April 1 |        |        |        |        | 162 59 | 186 59 | 210 41 |
| 7       | 234 19 | 258 15 | 283 2  | 309 14 | 337 13 | 6 51   | 37 16  |
| 21      | 67 12  | 95 41  | 122 28 | 147 47 | 172 6  |        |        |
| May 1   |        |        |        |        |        | 195 52 | 219 30 |
| 7       | 243 16 | 267 30 | 292 31 | 318 43 | 346 23 | 15 30  | 45 32  |
| 19      | 75 25  | 104 11 | 131 11 | 158 35 | 180 51 | 204 32 | 228 11 |
| June 1  |        |        |        | 240 8  | 264 28 | 289 11 | 315 24 |
| 9       | 342 34 | 10 10  | 39 40  | 69 0   | 98 10  | 126 2  | 152 19 |
| 21      | 177 8  | 201 2  | 224 40 | 248 39 |        |        |        |
| July 1  |        |        |        |        | 273 24 | 299 9  | 325 50 |
| 7       | 353 17 | 21 18  | 49 46  | 78 25  | 106 46 | 134 13 | 160 20 |
| 21      | 185 7  | 209 1  | 232 40 | 258 47 | 281 55 | 308 18 |        |
| Aug. 1  |        |        | 321 57 | 349 51 | 18 18  | 46 11  | 74 33  |
| 11      | 102 20 | 129 31 | 156 48 | 180 55 | 206 5  | 231 43 | 252 31 |
| 25      | 277 10 | 303 14 | 330 50 | 358 34 |        |        |        |
| Sep. 1  | 14 6   | 43 11  | 71 25  | 99 1   | 125 50 | 151 51 | 177 0  |
| 15      | 201 18 | 225 1  | 248 36 | 272 42 | 297 11 | 324 11 | 353 35 |
| 29      | 23 17  |        |        |        |        |        |        |
| Oct. 1  |        | 58 1   | 81 53  | 109 30 | 135 54 | 161 17 | 185 52 |
| 11      | 200 51 | 233 27 | 257 3  | 281 7  | 306 16 | 331 1  | 1 36   |
| 27      | 31 33  | 61 53  | 91 23  |        |        |        |        |
| Nov. 1  |        |        |        |        |        |        | 100 50 |
| 11      | 132 11 | 158 21 | 182 54 | 206 48 | 230 24 | 254 11 | 277 50 |
| 17      | 302 35 | 327 11 | 355 35 | 24 30  | 54 40  | 85 0   | 114 17 |
| Dec. 1  | 141 47 | 167 29 | 191 52 | 215 35 | 239 9  | 263 57 | 288 13 |
| 15      | 312 14 | 338 5  | 5 5    | 33 23  | 62 54  | 92 53  | 122 13 |
| 29      | 149 58 | 175 53 |        |        |        |        |        |

Ayanamsa: 21° 1' 41"



## Longitudes of Planets

|       | 1902 | Sun    | Mars   | Merc.   | Merc.  | Jupit.  | Venus   | Saturn  | Rahu   |
|-------|------|--------|--------|---------|--------|---------|---------|---------|--------|
| Jan.  | 5    | 284 14 | 302 45 | 224 12  | 224 27 | 292 27  | 326 33  | 288 14  | 220 15 |
|       | 15   | 294 10 | 310 11 | 302 50  | 311 19 | 294 47  | 331 34  | 289 25  | 219 45 |
|       | 25   | 304 37 | 318 11 | 319 36  | 327 12 | 297 8   | 333 21R | 290 36  | 219 12 |
| Feb.  | 4    | 314 46 | 324 27 | 332 52  | 333 27 | 299 33  | 331 8   | 291 44  | 218 41 |
|       | 14   | 324 53 | 334 27 | 333 40R | 328 39 | 301 46  | 325 38  | 292 50  | 218 9  |
|       | 24   | 334 58 | 342 15 | 323 31  | 320 47 | 303 59  | 320 1   | 293 51  | 217 7  |
| March | 6    | 345 0  | 350 11 | 320 52D | 323 16 | 306 8   | 317 33  | 294 48  | 217 5  |
|       | 16   | 354 59 | 357 55 | 327 24  | 332 14 | 308 9   | 319 2D  | 295 38  | 216 33 |
|       | 26   | 4 54   | 5 41   | 338 51  | 345 49 | 310 2   | 323 41  | 296 21  | 216 2  |
| April | 5    | 14 46  | 13 22  | 353 26  | 1 42   | 311 46  | 330 32  | 294 57  | 215 30 |
|       | 15   | 24 35  | 21 0   | 10 35   | 20 8   | 313 18  | 338 50  | 297 23  | 214 58 |
|       | 25   | 34 20  | 33 33  | 30 18   | 40 58  | 314 38  | 348 8   | 297 40  | 214 26 |
| May   | 5    | 44 3   | 36 1   | 51 41   | 61 59  | 315 43  | 358 9   | 297 48  | 213 55 |
|       | 15   | 53 43  | 43 23  | 71 18   | 79 20  | 316 31  | 8 11    | 297 46R | 213 33 |
|       | 25   | 63 20  | 50 41  | 91 57   | 91 1—  | 317 3   | 19 11   | 297 34  | 212 51 |
| June  | 4    | 72 55  | 57 53  | 94 26   | 94 2   | 317 15  | 30 33   | 297 14  | 212 19 |
|       | 14   | 82 29  | 65 0   | 95 45R  | 93 49R | 317 9R  | 41 51   | 296 44  | 211 53 |
|       | 24   | 92 1   | 72 1   | 91 0    | 88 26  | 316 44  | 53 19   | 295 9   | 211 15 |
| July  | 4    | 101 33 | 78 57  | 87 13   | 87 58D | 316 1   | 64 56   | 295 29  | 210 44 |
|       | 14   | 111 5  | 85 47  | 90 49   | 95 49  | 315 3   | 76 38   | 294 45  | 210 12 |
|       | 24   | 120 38 | 92 32  | 102 46  | 111 25 | 313 53  | 88 28   | 294 1   | 209 40 |
| Aug.  | 3    | 130 12 | 99 12  | 121 14  | 131 34 | 312 36  | 100 11  | 293 18  | 209 8  |
|       | 13   | 139 47 | 105 47 | 141 47  | 151 33 | 311 18  | 112 11  | 292 11  | 208 37 |
|       | 23   | 149 24 | 112 16 | 160 45  | 160 24 | 310 5   | 124 32  | 292 5   | 208 5  |
| Sep.  | 2    | 159 4  | 118 40 | 177 31  | 183 38 | 300 1   | 136 45  | 291 39  | 207 11 |
|       | 12   | 168 47 | 124 11 | 192 10  | 198 39 | 299 12  | 149 1   | 291 20  | 207 1  |
|       | 22   | 178 32 | 131 11 | 204 27  | 210 56 | 307 39  | 161 11  | 291 12  | 206 30 |
| Oct.  | 2    | 188 21 | 137 18 | 212 51  | 214 22 | 307 26  | 173 47  | 291 13D | 205 55 |
|       | 12   | 198 13 | 143 17 | 212 58  | 208 18 | 307 31D | 186 14  | 291 22  | 205 26 |
|       | 22   | 208 9  | 149 10 | 202 19  | 198 52 | 307 57  | 198 44  | 291 44  | 204 55 |
| Nov.  | 1    | 218 8  | 154 54 | 198 58D | 204 37 | 308 41  | 211 16  | 292 14  | 204 22 |
|       | 11   | 228 10 | 160 29 | 211 14  | 218 43 | 309 43  | 223 49  | 292 53  | 203 51 |
|       | 21   | 238 14 | 160 51 | 226 31  | 234 23 | 311 10  | 236 23  | 293 40  | 203 19 |
| Dec.  | 1    | 248 22 | 171 3  | 242 16  | 250 7  | 312 33  | 248 57  | 294 34  | 202 47 |
|       | 11   | 258 32 | 176 0  | 257 58  | 265 51 | 314 10  | 261 32  | 295 32  | 202 16 |
|       | 21   | 268 42 | 180 37 | 273 47  | 281 41 | 316 11  | 274 6   | 296 31  | 201 44 |
|       | 31   | 278 53 | 184 50 | 289 52  | —      | 318 13  | 286 41  | 297 41  | 201 12 |

Ayanamsa: 21° 2' 31"

## Longitude of the Moon

| 1902    | Sun.   | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  |        |        |        |        |        | 188 15 | 212 13 |
| Jan. ■  | 235 47 | 259 32 | 283 56 | 301 8  | 335 7  | 1 51   | 29 22  |
| 19      | 57 43  | 86 45  | 115 51 | 144 8  | 170 56 | 190 8  | 220 12 |
| Feb. 1  |        |        |        | 232 0  | 255 40 | 279 53 | 305 7  |
| 9       | 331 25 | 358 34 | 20 16  | 54 18  | 82 34  | 110 52 | 138 46 |
| 23      | 165 45 | 191 29 | 216 0  |        |        |        |        |
| March 1 |        |        |        | 239 47 | 263 29 | 287 47 | 313 15 |
| ■       | 340 5  | ■ 3    | 36 37  | 65 13  | 93 29  | 121 12 | 148 14 |
| ■       | 174 24 | 199 ■  | 223 56 | 274 41 | 271 24 |        |        |
| April 1 |        | 283 26 | 308 14 | 334 27 | 2 16   | 31 20  | 60 52  |
| 13      | 89 58  | 118 7  | 145 6  | 171 1  | 111 2  | 220 20 | 244 ■  |
| 27      | 267 49 | 291 45 |        |        |        |        |        |
| May 1   |        |        | 316 29 | 342 34 | 10 21  | 39 42  | 69 52  |
| 11      | 99 41  | 128 13 | 165 10 | 180 41 | 205 13 | 229 ■  | 252 50 |
| 25      | 276 33 | 300 36 | ■ 21   | 351 15 |        |        |        |
| June 1  | 4 48   | 33 11  | 63 4   | 93 31  | 123 16 | 151 18 | 177 30 |
| 15      | 202 17 | 226 13 | 249 52 | 273 36 | 297 40 | 322 16 | 347 ■  |
| 29      | 14 11  |        |        |        |        |        |        |
| July 1  |        | 42 12  | 71 41  | 101 56 | 131 43 | 159 57 | 186 16 |
| 13      | 211 8  | 234 56 | 258 35 | 282 28 | 306 52 | 331 55 | 357 41 |
| 27      | 24 21  | 52 7   | 81 ■   |        |        |        |        |
| Aug. 1  |        |        |        |        |        |        | 95 50  |
| 3       | 125 28 | 154 18 | 181 31 | 207 4  | 231 21 | 255 5  | 278 54 |
| 17      | 303 17 | 328 29 | ■ 31   | 21 18  | 48 48  | 76 59  | 105 43 |
| 31      | 134 31 |        |        |        |        |        |        |
| Sep. 1  |        |        |        |        | 148 43 | 176 16 | 202 25 |
| 7       | 227 13 | 251 13 | 274 58 | 299 7  | 324 10 | 350 21 | 17 33  |
| 21      | 4 29   | 73 48  | 102 12 | 130 22 | 158 0  |        |        |
| Oct. 1  |        |        |        |        |        | 184 46 | 210 28 |
| ■       | 226 8  | 259 5  | 282 50 | 306 58 | 332 5  | 358 35 | 20 20  |
| 19      | 55 21  | 84 29  | 113 10 | 141 23 | 167 33 | 193 50 | 218 56 |
| Nov. 1  |        |        |        | 231 12 | 255 17 | 279 1  | 302 49 |
| 9       | 327 10 | ■ 56   | 20 10  | 41 16  | 79 14  | 109 2  | 137 11 |
| ■       | 164 53 | 190 44 | 215 ■  | 239 55 |        |        |        |
| Dec. 1  |        |        |        |        | 263 48 | 287 31 | 311 19 |
| 7       | ■ 21   | ■ 4    | ■ 1    | 57 1   | ■ 11   | 118 1  | 147 16 |
| 21      | 174 40 | 200 22 | 224 55 | 248 12 | 272 37 | 296 22 |        |

Ayanamsa: 21° 2' 31"

# RAMAN'S EPHEMERIS Longitudes of Planets

1903 A.D.

|       | 1903 | Sun    | Mars    | Merc.   | Merc.   | Jupit.  | Venus   | Saturn  | Rahu   |
|-------|------|--------|---------|---------|---------|---------|---------|---------|--------|
| Jan.  | 5    | 284 00 | 186 47  | 297 55  | 305 42  | 319 19  | 292 58  | 298 18  | 200 58 |
|       | 16   | 294 11 | 190 16  | 312 38  | 317 37  | 321 32  | 305 32  | 299 29  | 200 24 |
|       | 25   | 304 21 | 193 7   | 319 5R  | 316 4R  | 323 50  | 318 4   | 300 40  | 199 52 |
| Feb.  | 4    | 314 31 | 198 8   | 310 8   | 305 16  | 326 12  | 330 35  | 301 51  | 199 21 |
|       | 14   | 324 38 | 196 11  | 303 10  | 304 41D | 328 36  | 343 1   | 303 00  | 198 49 |
|       | 24   | 334 43 | 194 4R  | 304 2   | —       | 331 00  | 355 30  | 304 7   | 198 17 |
| March | 6    | 344 45 | 194 41  | 318 37  | 325 10  | 333 24  | 7 53    | 305 9   | 197 45 |
|       | 16   | 354 44 | 192 4   | 332 21  | 340 0   | 335 46  | 20 12   | 306 7   | 197 14 |
|       | 26   | 4 39   | 188 32  | 348 22  | 357 13  | 337 5   | 32 27   | 306 59  | 196 42 |
| April | 5    | 11 24  | 184 40  | 6 37    | 16 35   | 340 19  | 44 37   | 307 44  | 196 10 |
|       | 15   | 24 34  | 181 13  | 27 1    | 37 33   | 342 28  | 56 40   | 308 21  | 195 13 |
|       | 25   | 34 6   | 178 45  | 47 40   | 56 41   | 344 29  | 68 37   | 308 49  | 195 0  |
| May   | 5    | 43 49  | 177 33R | 64 13   | 70 1    | 346 22  | 80 26   | 309 9   | 194 35 |
|       | 15   | 53 28  | 177 30D | 73 57   | 76 52   | 348 1   | 92 1    | 309 18  | 193 57 |
|       | 25   | 63 6   | 178 1   | 75 49   | 74 3R   | 349 35  | 103 36  | 309 18R | 193 31 |
| June  | 4    | 72 41  | 181 12  | 71 23R  | 68 53   | 350 53  | 114 52  | 309 1   | 192 52 |
|       | 14   | 82 14  | 184 19  | 67 36   | 68 5    | 351 55  | 125 52  | 308 50  | 192 28 |
|       | 24   | 91 47  | 188 7   | 70 29D  | 74 43D  | 352 41  | 136 31  | 308 22  | 191 56 |
| July  | 4    | 101 19 | 192 30  | 80 41   | 84 14   | 353 9   | 146 42  | 307 48  | 191 24 |
|       | 14   | 110 51 | 197 20  | 97 13   | 107 17  | 353 18  | 156 17  | 307 9   | 190 51 |
|       | 24   | 120 24 | 202 34  | 117 52  | 128 21  | 353 8R  | 165 00  | 306 25  | 190 20 |
| Aug.  | 3    | 129 58 | 208 9   | 138 22  | 147 47  | 352 38  | 172 30  | 305 41  | —      |
|       | 13   | 139 33 | 214 2   | 156 31  | 164 38  | 351 51  | 178 14  | 304 57  | 189 17 |
|       | 23   | 149 10 | 220 11  | 172 9   | 179 3   | 350 49  | 181 24  | 304 17D | 188 51 |
| Sep.  | 2    | 158 49 | 226 34  | 185 14  | 190 24  | 349 35  | 181 11R | 303 42R | 188 14 |
|       | 12   | 168 12 | 233 10  | 194 45  | 197 28  | 348 16D | 177 18  | 303 14  | 187 41 |
|       | 22   | 178 18 | 239 57  | 197 56R | 195 15H | 346 58R | 171 19  | 302 54  | 187 10 |
| Oct.  | 2    | 188 7  | 246 55  | 190 31  | 185 12  | 345 45  | 166 44  | 302 43  | 186 38 |
|       | 12   | 197 59 | 254 2   | 183 54  | 184 57D | 344 11  | 165 52  | 302 42  | 186 6  |
|       | 22   | 207 55 | 261 19  | 190 21  | 197 35  | 343 59  | 168 53D | 302 51D | 185 35 |
| Nov.  | 1    | 217 53 | 268 43  | 205 35  | 213 41  | 343 30R | 174 40  | 303 11  | 185 3  |
|       | 11   | 227 55 | 276 13  | 221 55  | 229 59  | 343 25D | 182 23  | 303 20  | 184 30 |
|       | 21   | 238 00 | 283 50  | 237 59  | 245 49  | 343 39  | 191 27  | 304 17  | 183 59 |
| Dec.  | 1    | 248 8  | 291 32  | 253 38  | 261 26  | 344 13  | 201 15  | 305 1   | 183 27 |
|       | 11   | 258 17 | 299 18  | 269 11  | 276 58  | 345 1   | 212 3   | 305 55  | 182 56 |
|       | 21   | 268 27 | 307 6   | 284 35  | 291 48  | 345 16  | 223 5   | 306 24  | 182 24 |
|       | 31   | 278 28 | 314 57  | 298 5   | —       | 347 41  | 234 35  | 307 57  | 181 52 |

Ayanamsa : 21° 3' 21"

## Longitude of the Moon

| 1903    | Sun.   | Tues.  | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  |        |        | 308 18 | 332 27 | 357 14 | 23 11  | 50 48  |
| 11      | 80 13  | 110 47 | 141 6  | 169 52 | 196 38 | 221 45 | 245 51 |
| 25      | 269 33 | 293 18 | 317 21 | 341 51 |        |        |        |
| Feb. 1  | 354 18 | 19 50  | 46 29  | 74 33  | 104 00 | 134 5  | 163 34 |
| 15      | 191 20 | 217 36 | 242 17 | 266 10 | 289 53 | 313 55 | 338 32 |
| March 1 | 3 53   | 30 00  | 56 60  | 84 56  | 113 43 | 142 52 | 171 38 |
| 15      | 199 51 | 225 23 | 250 12 | 274 12 | 297 58 | 322 6  | 347 3  |
| 29      | 13 00  | 39 57  |        |        |        |        |        |
| April 1 |        |        |        |        |        | 53 44  | 81 45  |
| 5       | 110 8  | 138 33 | 166 40 | 194 4  | 220 27 | 245 45 | 270 6  |
| 19      | 293 56 | 317 50 | 342 24 | 8 8    | 35 14  | 63 31  |        |
| May 1   |        |        |        |        |        |        | 92 24  |
| 3       | 121 10 | 149 21 | 176 43 | 203 16 | 228 59 | 253 55 | 278 8  |
| 17      | 301 57 | 325 48 | 350 19 | 16 7   | 43 34  | 72 34  | 102 19 |
| 31      | 131 44 |        |        |        |        |        |        |
| June 1  |        |        |        |        | 146 2  | 173 41 | 200 6  |
| 7       | 225 36 | 250 23 | 274 37 | 298 29 | 322 17 | 346 15 | 11 14  |
| 21      | 37 47  | 66 14  | 96 12  | 126 11 | 155 58 |        |        |
| July 1  |        |        |        |        |        | 183 47 | 210 2  |
| 5       | 235 7  | 259 31 | 283 29 | 307 15 | 331 00 | 355 6  | 20 3   |
| 19      | 46 27  | 74 43  | 104 39 | 135 13 | 165 1  | 193 7  | 219 27 |
| Aug. 1  |        |        |        | 232 4  | 256 35 | 280 32 | 304 17 |
| 9       | 328 6  | 352 11 | 16 52  | 42 32  | 69 40  | 96 26  | 128 27 |
| 23      | 158 37 | 187 44 | 215    | 240 52 | 265 23 |        |        |
| Sep. 1  |        | 277 22 | 301 7  | 324 57 | 349 9  | 13 56  | 39 30  |
| 13      | 66 6   | 93 52  | 122 45 | 152 16 | 181 32 | 209 42 | 236 19 |
| 27      | 261 29 | 285 39 |        |        |        |        |        |
| Oct. 1  |        |        | 309 25 | 333 19 | 357 50 | 23 12  | 49 31  |
| 11      | 76 43  | 104 38 | 133 4  | 161 43 | 190 7  | 217 44 | 244 11 |
| 25      | 269 23 | 293 34 | 317 19 | 341 15 |        |        |        |
| Nov. 1  | 353 29 | 18 46  | 45 20  | 73 1   | 101 22 | 129 50 | 158 2  |
| 15      | 185 48 | 212 59 | 239 25 | 264 54 | 289 27 | 313 27 | 336 50 |
| 29      | 1 11   |        |        |        |        |        |        |
| Dec. 1  |        | 26 36  | 53 37  | 82 9   | 111 28 | 140 36 | 168 53 |
| 13      | 196 11 | 220 37 | 248 20 | 273 19 | 297 37 | 321 22 | 344 59 |
| 27      | 5 4    | 34 22  | 61 26  |        |        |        |        |

Ayanamsa: 21° 3' 21"

# RAMAN'S EPHEMERIS Longitudes of Planets

1904 A.D.

| 1904  | Sun.      | Mars.  | Merc.   | Merc.   | Jupit. | Venus  | Saturn  | Rahu   |
|-------|-----------|--------|---------|---------|--------|--------|---------|--------|
| Jan.  | 5 283 45  | 318 52 | 302 16  | 302 41R | 348 29 | 240 24 | 308 30  | 181 36 |
|       | 15 293 56 | 326 44 | 299 38R | 292 10  | 350 14 | 252 11 | 309 39  | 200 24 |
|       | 25 304 7  | 334 35 | 297 52  | 287 9D  | 352 9  | 264 7  | 310 50  | 199 52 |
| Feb.  | 4 314 16  | 342 25 | 289 21  | 293 30  | 354 26 | 276 9  | 312 2   | 199 21 |
|       | 14 324 23 | 350 14 | 298 52  | 305 4   | 356 24 | 288 18 | 313 13  | 198 48 |
|       | 24 334 28 | 357 59 | 311 54  | 319 13  | 358 41 | 300 27 | 314 24  | 198 17 |
| March | 6 345 30  | 6 26   | 328 38  | 336 59  | 1 17   | 313 53 | 315 38  | 197 45 |
|       | 16 355 29 | 14 3   | 345 50  | 355 10  | 3 41   | 326 7  | 316 41  | 197 14 |
|       | 26 5 25   | 21 36  | 5 1     | 15 13   | 6 6    | 338 22 | 317 40  | 196 48 |
| April | 5 15 16   | 29 4   | 25 27   | 35 6    | 8 31   | 350 38 | 318 32  | 196 10 |
|       | 15 25 5   | 36 28  | 43 26   | 49 55   | 10 55  | 2 54   | 319 18  | 195 38 |
|       | 25 34 51  | 43 46  | 54 14   | 56 15   | 13 16  | 15 9   | 319 57  | 195 11 |
| May   | 5 44 33   | 50 59  | 56 00R  | 53 57R  | 15 34  | 27 24  | 320 27  | 194 41 |
|       | 15 54 12  | 58 8   | 51 3    | 48 33   | 17 47  | 39 40  | 320 47  | 194 3  |
|       | 25 63 49  | 65 11  | 47 24   | 48 3D   | 19 54  | 51 55  | 320 58  | 193 31 |
| June  | 4 73 24   | 72 9   | 50 32   | 54 40   | 21 53  | 64 10  | 321 00R | 192 59 |
|       | 14 82 58  | 79 3   | 60 18   | 67 18   | 23 43  | 76 26  | 320 51  | 192 28 |
|       | 24 92 31  | 85 52  | 75 34   | 85 11   | 25 23  | 88 42  | 320 34  | 191 56 |
| July  | 4 102 8   | 92 37  | 95 26   | 106 14  | 26 51  | 100 59 | 320 8   | 191 24 |
|       | 14 111 35 | 99 18  | 116 52  | 126 58  | 28 5   | 113 17 | 319 34  | 190 52 |
|       | 24 121 7  | 105 54 | 136 22  | 145 3   | 29 4   | 125 36 | 318 55  | 190 20 |
| Aug.  | 3 130 41  | 112 27 | 153 00  | 160 15  | 29 45  | 139 10 | 318 12  | 189 49 |
|       | 13 140 16 | 118 57 | 166 45  | 172 22  | 30 11  | 150 16 | 317 27  | 189 17 |
|       | 23 149 54 | 125 23 | 176 55  | 180 4   | 30 12R | 162 37 | 316 43  | 188 45 |
| Sep.  | 2 159 33  | 131 46 | 181 20  | 178 59R | 29 55  | 174 58 | 316 2   | 188 14 |
|       | 12 169 16 | 138 5  | 176 28R | 171 21  | 29 19  | 187 19 | 315 25  | 187 41 |
|       | 22 179 2  | 144 21 | 167 32  | 168 21D | 28 26  | 199 40 | 314 56  | 187 10 |
| Oct.  | 2 188 51  | 150 35 | 171 1   | 177 34  | 27 26  | 212 00 | 314 35  | 186 35 |
|       | 12 198 44 | 156 44 | 185 35  | 194 7   | 26 1   | 224 20 | 314 23  | 186 0  |
|       | 22 208 40 | 162 50 | 202 41  | 211 16  | 24 49  | 236 38 | 314 21D | 185 35 |
| Nov.  | 1 218 39  | 168 53 | 210 19  | 227 21  | 23 22  | 248 56 | 314 30  | 185 3  |
|       | 11 228 41 | 174 51 | 235 13  | 242 11  | 22 12  | 261 12 | 314 48  | 184 31 |
|       | 21 238 46 | 180 43 | 250 37  | 258 10  | 21 15  | 273 26 | 315 16  | 183 59 |
| Dec.  | 1 248 53  | 186 31 | 265 33  | 272 40  | 20 36  | 285 37 | 315 54  | 183 27 |
|       | 11 259 31 | 192 11 | 279 10  | 284 24  | 20 16  | 297 44 | 316 39  | 182 56 |
|       | 21 269 14 | 197 44 | 287 3   | 285 31R | 20 18D | 309 45 | 317 32  | 182 24 |
|       | 31 279 25 | 203 8  | 279 47R | —       | 20 40  | 321 39 | 318 30  | 181 52 |

Ayanamsa: 21° 4' 12"

1904 A.D.

## RAMAN'S EPHEMERIS

29

## Longitude of the Moon

| 1904    | Sun.   | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  |        |        |        |        |        |        | 75 42  |
| 3       | 105 21 | 135 31 | 164 58 | 193 1  | 219 41 | 245 14 | 270 2  |
| 17      | 294 15 | 318 3  | 341 54 | 5 25   | 29 55  | 55 50  | 83 39  |
| 31      | 113 17 |        |        |        |        |        |        |
| Feb. 1  |        |        |        |        | 128 31 | 159 00 | 188 25 |
| 7       | 216 8  | 242 14 | 267 7  | 291 16 | 315 1  | 338 39 | 2 25   |
| 21      | 28 39  | 51 50  | 78 25  | 106 44 | 136 33 |        |        |
| March 1 |        | 151 45 | 181 57 | 210 57 | 238 12 | 263 47 | 288 11 |
| 13      | 311 57 | 335 34 | 359 24 | 23 44  | 48 49  | 74 52  | 102 9  |
| 27      | 130 42 | 160 13 | 189 56 |        |        |        |        |
| April 1 |        |        |        |        |        |        | 204 34 |
| 3       | 232 49 | 259 25 | 284 30 | 308 32 | 332 9  | 355 57 | 20 22  |
| 17      | 45 39  | 71 51  | 93 55  | 126 47 | 155 17 | 184 11 | 212 55 |
| May 1   | 240 48 | 267 21 | 292 20 | 316 34 | 340 13 | 4 7    | 28 15  |
| 15      | 54 44  | 81 45  | 109 34 | 137 45 | 166 1  | 194 12 | 222 4  |
| 29      | 249 16 | 275 25 |        |        |        |        |        |
| June 1  |        |        |        |        |        | 288 3  | 312 31 |
| 5       | 336 17 | 359 59 | 24 21  | 49 58  | 77 3   | 105 21 | 134 11 |
| 19      | 162 50 | 190 57 | 218 26 | 245 15 | 271 15 | 296 22 |        |
| July 1  |        |        |        |        |        |        | 320 36 |
| 3       | 344 18 | 7 59   | 32 21  | 58 3   | 85 28  | 114 23 | 143 59 |
| 17      | 173 16 | 201 37 | 228 52 | 255 6  | 280 28 | 305 4  | 329 2  |
| 31      | 352 39 |        |        |        |        |        |        |
| Aug. 1  |        |        |        |        | 4 26   | 28 22  | 53 17  |
| 7       | 79 46  | 108 3  | 137 47 | 167 57 | 197 25 | 225 30 | 252 7  |
| 21      | 277 30 | 302 00 | 325 55 | 349 33 | 13 11  | 37 13  |        |
| Sep. 1  |        |        | 49 32  | 75 5   | 102 13 | 131 5  | 161 12 |
| 11      | 191 29 | 220 46 | 248 24 | 274 22 | 299 2  | 322 57 | 346 33 |
| 25      | 10 14  | 34 17  | 58 58  |        |        |        |        |
| Oct. 1  |        |        |        | 84 37  | 111 31 | 129 53 | 169 30 |
| 9       | 199 37 | 229 5  | 257 00 | 283 7  | 307 46 | 331 34 | 355 9  |
| 23      | 19 1   | 43 29  | 68 42  | 94 44  | 121 41 |        |        |
| Nov. 1  |        | 135 31 | 163 58 | 193 13 | 222 38 | 251 15 | 278 19 |
| 13      | 303 44 | 327 55 | 351 32 | 15 17  | 39 44  | 65 10  | 91 31  |
| 27      | 118 37 | 146 15 |        |        |        |        |        |
| Dec. 1  |        |        | 174 22 | 202 51 | 231 23 | 259 22 | 286 9  |
| 11      | 311 31 | 335 43 | 359 22 | 23 10  | 47 48  | 73 40  | 100 48 |
| 25      | 128 46 | 157 5  | 185 20 | 213 23 |        |        |        |

Ayanamsa: 21° 4' 12"

## Longitudes of Planets

| 1905  | Sun       | Mars    | Merc.   | Merc.   | Jupit. | Venus  | Saturn  | Rahu   |
|-------|-----------|---------|---------|---------|--------|--------|---------|--------|
| Jan.  | 5 334 31  | 215 45  | 273 39R | 270 56R | 20 58  | 327 32 | 319 2   | 162 14 |
|       | 15 304 42 | 210 51  | 271 57D | 275 29  | 21 49  | 339 ■  | 320 ■   | 161 42 |
|       | 25 304 53 | 215 41  | 280 ■   | 286 ■   | 22 58  | 350 27 | 321 17  | 161 10 |
| Feb.  | 4 315 2   | 220 13  | 293 16  | 300 24  | 24 31  | 1 24   | 322 28  | 160 38 |
|       | 14 335 2  | 224 23  | 307 55  | 315 49  | 25 58  | 11 49  | 323 48  | 160 ■  |
|       | 24 335 14 | 228 1   | 324 6   | 332 48  | 27 47  | 21 31  | 324 53  | 159 35 |
| March | 6 345 16  | 231 5   | 341 56  | 351 29  | 29 45  | 30 31  | 326 ■   | 159 3  |
|       | 16 355 15 | 233 24  | 1 23    | 11 15   | 31 51  | 37 29  | 327 12  | 158 31 |
|       | 26 5 10   | 234 47  | 20 31   | 21 21   | 34 3   | 42 36  | 328 17  | 157 09 |
| April | 5 15 2    | 235 4R  | 33 59   | 58R     | 36 19  | 44 42R | 329 17  | 157 28 |
|       | 15 24 51  | 234 6   | 37 15R  | 35 13   | 39 39  | 42 56  | 330 12  | 156 56 |
|       | 25 34 36  | 231 55  | 31 57   | 25 21   | 41 1   | 37 40  | 331 0   | 156 24 |
| May   | 5 44 18   | 228 44R | 27 20   | 27 37D  | 43 24  | 31 43  | 331 40  | 155 52 |
|       | 15 53 58  | 225 7   | 20 47   | 33 36   | 45 47  | 28 29  | 332 12  | 155 20 |
|       | 25 53 35  | 221 49  | 38 48   | 45 12   | 48 ■   | 29 7D  | 332 36  | 154 49 |
| June  | 4 73 10   | 210 27  | 52 45   | 61 22   | 50 27  | 33 5   | 332 50  | 154 17 |
|       | 14 82 44  | 218 23  | 71 0    | 81 28   | 52 41  | 39 22  | 332 54R | 153 45 |
|       | 24 92 16  | 218 40D | 92 22   | 103 11  | 54 50  | 47 14  | 332 48  | 153 13 |
| July  | 4 101 23  | 220 12  | 113 25  | 122 55  | 56 54  | 56 11  | 332 33R | 152 41 |
|       | 14 111 21 | 222 50  | 131 25  | 139 27  | 58 50  | 65 54  | 332 8   | 152 10 |
|       | 24 120 23 | 226 22  | 146 28  | 152 36  | 60 36  | 76 11  | 331 37  | 151 38 |
| Aug.  | 3 130 27  | 230 38  | 157 42  | 161 30  | 62 12  | 86 53  | 330 58  | 151 ■  |
|       | 13 140 2  | 235 33  | 163 45  | 163 51R | 63 25  | 97 55  | 330 15  | 150 34 |
|       | 23 140 40 | 240 56  | 161 40R | 167 33  | 64 44  | 109 13 | 329 30  | 150 ■  |
| Sep.  | 2 150 20  | 243 46  | 153 7R  | 160 40  | 65 37  | 120 46 | 328 46R | 149 28 |
|       | 12 169 2  | 252 58  | 151 43D | 165 17  | 66 13  | 132 30 | 328 3   | 148 59 |
|       | 22 178 48 | 260 27  | 163 27  | 171 59  | 66 29  | 144 23 | 327 25  | 148 27 |
| Oct.  | 2 188 37  | 266 11  | 180 57  | 189 54  | 66 28R | 156 17 | 326 54  | 147 53 |
|       | 12 198 24 | 273 ■   | 198 36  | 207 00  | 66 ■   | 168 37 | 326 30R | 147 24 |
|       | 22 208 25 | 280 17  | 215 9   | 223 2   | 66 20  | 180 54 | 326 16  | 146 52 |
| Nov.  | 1 218 24  | 287 35  | 230 42  | 238 15  | 64 20  | 193 16 | 325 12D | 146 20 |
|       | 11 228 26 | 296 00  | 245 33  | 252 36  | 63 8   | 205 42 | 325 19  | 145 48 |
|       | 21 238 31 | 302 30  | 259 15  | 265 ■   | 61 49  | 218 15 | 325 35  | 145 17 |
| Dec.  | 1 248 39  | 310 4   | 269 31R | 271 17  | 60 27R | 230 43 | 327 2   | 144 46 |
|       | 11 258 48 | 317 42  | 278 47  | 262 32R | 59 10  | 243 17 | 327 38  | 144 13 |
|       | 21 268 59 | 325 21  | 286 46  | 282 1   | 58 4   | 255 51 | 328 22  | 143 41 |
|       | 31 279 10 | 333 00  | 296 58D | —       | 57 13  | 268 55 | 329 14  | 143 10 |

Ayanamasa: 21° 5' 02"



## Longitude of the Moon

|       | 1905 | Sun.   | Tue.   | Thurs. | Sat.   | Mon.   | Wed.              | Fri.              |
|-------|------|--------|--------|--------|--------|--------|-------------------|-------------------|
| Jan.  | 1    | 227 17 | 254 43 | 281 22 | 306 59 | 331 33 | 355 21            | 18 58             |
|       | 15   | 43 5   | 68 22  | 95 12  | 123 29 | 152 35 | 181 43            | 210 15            |
|       | 29   | 237 54 | 264 38 |        |        |        |                   |                   |
| Feb.  | 1    |        |        |        |        |        | 277 40            | 308 4             |
|       | 5    | 327 40 | 351 36 | 15 12  | 38 58  | 63 30  | 89 ■              | 117 2             |
|       | 19   | 146 14 | 176 13 | 205 56 | 234 31 | 261 39 |                   |                   |
| March | 1    |        |        |        |        |        | 287 27            | 312 16            |
|       | 5    | 336 24 | 0 7    | 23 44  | 47 34  | 72 4   | 97 46             | 125 5             |
|       | 19   | 154 9  | 184 25 | 214 44 | 243 54 | 271 18 | 297 00            | 321 30            |
| April | 1    |        |        |        | 333 27 | 357 7  | 26 44             | 44 35             |
|       | 9    | 68 55  | 94 1   | 120 17 | 148 5  | 177 27 | 207 48            | 237 53            |
|       | 23   | 266 32 | 293 15 | 318 18 | 342 17 |        |                   |                   |
| May   | 1    |        |        |        |        | 5 53   | 29 34             | 53 42             |
|       | 7    | 78 26  | 103 53 | 130 15 | 157 47 | 186 36 | 216 21            | 246 6             |
|       | 21   | 274 42 | 301 32 | 326 40 | 350 42 | 14 20  | 38 10             |                   |
| June  | 1    |        |        | 50 18  | 75 10  | 100 49 | 127 15            | 154 26            |
|       | 11   | 182 26 | 211 13 | 240 19 | 268 58 | 296 23 | <del>322</del> 15 | 346 48            |
|       | 25   | 10 36  | 34 21  | 58 40  |        |        |                   |                   |
| July  | 1    |        |        |        | 83 55  | 110 13 | 137 23            | 165 12            |
|       | 9    | 193 24 | 221 49 | 250 8  | 277 54 | 304 40 | 330 18            | <del>354</del> 41 |
|       | 23   | 18 31  | 42 18  | 66 42  | 92 11  | 118 59 |                   |                   |
| Aug.  | 1    |        | 132 51 | 161 14 | 190 00 | 218 38 | 246 44            | 274 ■             |
|       | 13   | 300 33 | 326 4  | 350 42 | 14 41  | 38 24  | 62 23             | 87 14             |
|       | 27   | 113 28 | 141 18 | 170 25 |        |        |                   |                   |
| Sep.  | 1    |        |        |        |        |        |                   | 185 14            |
|       | 3    | 214 46 | 243 30 | 271 1  | 297 19 | 322 37 | 347 19            | 11 10             |
|       | 17   | 34 54  | 58 41  | 82 57  | 108 17 | 135 12 | <del>161</del> 54 | 193 57            |
| Oct.  | 1    | 224 18 | 253 30 | 281 7  | 307 8  | 331 58 | 356 7             | 19 55             |
|       | 15   | 43 39  | 67 30  | 91 49  | 117 1  | 143 38 | 172 3             | 202 ■             |
|       | 29   | 232 43 | 262 28 |        |        |        |                   |                   |
| Nov.  | 1    |        |        |        |        |        | 276 41            | 303 39            |
|       | 5    | 328 56 | 358 9  | 16 55  | 40 38  | 64 34  | 88 32             | 113 45            |
|       | 19   | 139 34 | 166 44 | 195 31 | 225 35 | 255 50 | 284 55            |                   |
| Dec.  | 1    |        |        |        |        |        |                   | 312 8             |
|       | 3    | 337 34 | 1 48   | 25 31  | 49 17  | 73 28  | 98 12             | 123 35            |
|       | 17   | 149 44 | 176 52 | 205 10 | 234 27 | 263 59 | 292 44            | 319 58            |
|       | 31   | 345 33 |        |        |        |        |                   |                   |

Ayanamsa : 21° 5' 02"

## Longitudes of Planets

|       | 1906 | Sun    | Mars   | Merc.   | Merc.   | Jupit. | Venus   | Saturn  | Rahu   |
|-------|------|--------|--------|---------|---------|--------|---------|---------|--------|
| Jan.  | 5    | 284 16 | 336 50 | 261 20  | 287 2   | 56 54R | 274 42  | 329 43  | 142 54 |
|       | 15   | 294 27 | 344 38 | 273 28  | 280 25  | 56 31  | 287 17  | 330 44  | 142 22 |
|       | 25   | 304 38 | 352 4  | 287 43  | 295 19  | 56 29D | 299 51  | 331 49  | 141 50 |
| Feb.  | 4    | 314 47 | 358 38 | 303 12  | 311 24  | 56 47  | 312 24  | 332 59  | 141 18 |
|       | 14   | 324 54 | 7 9    | 319 56  | 328 50  | 57 25  | 324 56  | 334 10  | 140 47 |
|       | 24   | 334 59 | 14 36  | 338 5   | --      | 57 21  | 337 28  | 335 23  | 140 14 |
| March | 6    | 345 1  | 21 59  | 357 6   | 5 55    | 59 32  | 349 57  | 336 36  | 139 43 |
|       | 16   | 355 0  | 29 17  | 13 9    | 17 48   | 60 58  | 2 25    | 337 48  | 139 11 |
|       | 26   | 4 55   | 36 31  | 19 19R  | 17 47R  | 62 36  | 14 51   | 338 58  | 138 40 |
| April | 5    | 14 47  | 43 41  | 14 14   | 10 27   | 64 25  | 27 14   | 340 4   | 138 11 |
|       | 15   | 24 36  | 50 46  | 8 8     | 7 40D   | 66 22  | 39 35   | 341 6   | 137 36 |
|       | 25   | 34 22  | 57 47  | 9 22D   | 12 46   | 68 26  | 51 53   | 342 3   | 137 4  |
| May   | 5    | 44 4   | 64 43  | 17 36   | 23 34   | 70 35  | 64 8    | 342 53  | 136 33 |
|       | 15   | 53 43  | 71 35  | 30 33   | 32 25   | 72 49  | 76 20   | 343 37  | 136 1  |
|       | 25   | 63 21  | 78 23  | 47 19   | 57 3    | 75 6   | 88 29   | 344 12  | 135 29 |
| June  | 4    | 72 56  | 85 7   | 67 32   | 78 29   | 77 24  | 100 34  | 344 38  | 134 57 |
|       | 14   | 82 30  | 91 48  | 89 22   | 99 40   | 79 43  | 112 36  | 344 55  | 134 25 |
|       | 24   | 92 2   | 98 25  | 109 11  | 117 47  | 82 1   | 124 33  | 345 2   | 133 53 |
| July  | 4    | 101 34 | 105 00 | 125 26  | 132 6   | 84 7   | 136 25  | 344 59R | 133 22 |
|       | 14   | 111 6  | 111 31 | 137 44  | 142 6   | 86 30  | 148 11  | 344 46  | 132 50 |
|       | 24   | 120 39 | 118 1  | 145 00  | 146 1   | 88 40  | 159 50  | 344 25  | 132 18 |
| Aug.  | 3    | 131 10 | 125 6  | 145 1R  | 142 11  | 90 43  | 171 20  | 343 54  | 131 46 |
|       | 13   | 139 48 | 130 53 | 138 2   | 134 15  | 92 41  | 182 40  | 343 17  | 131 15 |
|       | 23   | 149 26 | 137 16 | 133 53D | 136 11D | 94 31  | 196 43  | 342 11  | 130 49 |
| Sep.  | 2    | 159 5  | 143 38 | 141 35  | 149 17  | 96 9   | 204 35  | 341 50R | 130 8  |
|       | 12   | 168 48 | 149 59 | 158 18  | 167 43  | 97 37  | 213 60  | 341 11  | 129 39 |
|       | 22   | 178 34 | 156 19 | 177 1   | 186 00  | 98 52  | 224 57  | 340 21  | 129 7  |
| Oct.  | 2    | 188 23 | 162 37 | 194 37  | 202 52  | 99 51  | 234 11  | 339 41R | 128 33 |
|       | 12   | 198 15 | 168 55 | 210 49  | 218 28  | 100 34 | 242 23  | 339 7   | 127 59 |
|       | 22   | 208 11 | 175 12 | 225 50  | 232 54  | 100 59 | 249 4   | 338 41  | 127 32 |
| Nov.  | 1    | 218 10 | 181 27 | 241 36  | 245 45  | 101 3R | 252 50  | 338 25  | 127 00 |
|       | 11   | 228 12 | 187 42 | 250 11  | 254 34  | 100 48 | 254 40R | 338 18  | 126 29 |
|       | 21   | 238 17 | 193 11 | 255 14R | 261 56R | 100 14 | 251 57  | 338 23D | 125 57 |
| Dec.  | 1    | 248 24 | 199 8  | 245 24  | 240 15  | 99 22  | 246 19  | 338 37  | 125 25 |
|       | 11   | 258 33 | 205 19 | 239 27D | 245 21  | 98 15  | 241 10  | 339 2   | 125 00 |
|       | 21   | 268 44 | 212 27 | 247 27  | 251 41  | 96 58  | 239 28D | 339 15  | 124 22 |
|       | 31   | 278 55 | 218 34 | 260 32  | --      | 95 37  | 241 39  | 340 19  | 123 50 |

Ayanamsa: 21° 5' 52"

## Longitude of the Moon

| 1906    | Sun.   | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  |        |        |        |        | 357 51 | 21 50  | 45 33  |
| 7       | 69 37  | 94 23  | 120 2  | 146 32 | 173 47 | 201 41 | 230 6  |
| 21      | 258 44 | 287 ■  | 314 28 | 340 38 | 5 34   | 29 38  |        |
| Feb. 1  |        |        | 41 31  | 65 22  | 89 49  | 115 20 | 142 5  |
| 11      | 169 54 | 198 21 | 226 55 | 255 11 | 282 54 | 309 52 | 335 59 |
| 25      | 1 10   | 25 32  |        |        |        |        |        |
| March 1 |        |        | 49 22  | 73 11  | 97 34  | 123 8  | 150 16 |
| 11      | 178 52 | 208 17 | 231 36 | 266 1  | 293 18 | 319 32 | 344 55 |
| 25      | 9 37   | 33 46  | 57 33  | 81 20  |        |        |        |
| April 1 | 93 22  | 118 19 | 144 23 | 172 27 | 202 8  | 232 25 | 262 0  |
| 15      | 290 6  | 316 37 | 341 56 | 6 ■    | 30 32  | 54 20  | 78 4   |
| 29      | 102 2  |        |        |        |        |        |        |
| May 1   |        | 126 44 | 152 46 | 180 41 | 210 24 | 241 1  | 271 7  |
| 13      | 299 35 | 326 12 | 351 23 | 15 40  | 39 31  | 63 15  | 87 4   |
| 27      | 111 12 | 136 1  | 162 00 |        |        |        |        |
| June 1  |        |        |        |        |        |        | 175 35 |
| ■       | 204 7  | 234 8  | 264 35 | 294 7  | 321 57 | 347 55 | 12 33  |
| 17      | ■ 30   | 60 13  | 84 1   | 108 18 | 133 6  | 158 46 | 185 35 |
| July 1  | 213 47 | 243 11 | 273 ■  | 302 17 | 330 5  | 356 13 | 21 00  |
| 15      | 44 ■   | 68 43  | 92 43  | 117 19 | 142 43 | 169 00 | 196 12 |
| 29      | 224 18 | 253 5  |        |        |        |        |        |
| Aug. 1  |        |        |        |        |        | 267 36 | 296 25 |
| ■       | 324 32 | 351 19 | 16 45  | 41 7   | 64 56  | 88 49  | 113 18 |
| 19      | 138 47 | 165 22 | 192 56 | 221 7  | 249 32 | 277 52 | 305 49 |
| Sep. 1  |        |        |        | 319 34 | 346 24 | 12 12  | 36 57  |
| 9       | 60 57  | 84 42  | 108 50 | 133 59 | 160 32 | 188 29 | 217 19 |
| 23      | 246 16 | 274 40 | 302 18 | 329 9  |        |        |        |
| Oct. 1  |        |        |        |        | 355 14 | 20 ■   | 45 ■   |
| 7       | 68 59  | 92 40  | 116 42 | 141 49 | 163 34 | 197 6  | 226 47 |
| 21      | 256 31 | 285 18 | 312 47 | 339 7  | ■ 34   | 29 21  |        |
| Nov. 1  |        |        | 41 31  | 65 30  | 89 10  | 112 53 | 137 16 |
| 11      | 162 59 | 190 36 | 220 ■  | 250 30 | 280 32 | 309 7  | 336 3  |
| 25      | 1 38   | 26 19  | 50 26  |        |        |        |        |
| Dec. 1  |        |        |        | 74 13  | 97 53  | 121 ■  | 146 6  |
| 9       | 171 41 | 198 58 | 228 7  | 258 31 | 288 53 | 317 56 | 345 15 |
| 23      | 10 55  | 35 26  | ■ 19   | ■ 0    | 106 46 |        |        |

Ayanamasa: 21° 5' 52"

## Longitudes of Planets

| 1907  | Sun      | Mars    | Merc.   | Merc.   | Jupit.  | Venus  | Saturn  | Rahu   |
|-------|----------|---------|---------|---------|---------|--------|---------|--------|
| Jan.  | ■ 284 ■  | 221 36  | 267 45  | 275 12  | 94 57R  | 243 58 | 340 44  | 123 34 |
| 15    | 294 12   | 227 38  | 282 52  | 290 44  | 93 41   | 250 24 | 341 38  | 123 2  |
| 25    | 304 23   | 233 36  | 298 51  | 307 13  | 92 36   | 258 33 | 342 39  | 122 30 |
| Feb.  | ■ 314 32 | 239 29  | 315 52  | 324 48  | 91 45   | 267 51 | 343 44  | 121 59 |
| 14    | 324 40   | 245 17  | 333 56  | 342 58  | 91 13   | 277 57 | 344 54  | 121 27 |
| 24    | 334 45   | 250 57  | 351 18  | 357 51  | 91 00   | 288 35 | 346 0   | 120 55 |
| March | 6 344 46 | 256 28  | 1 28    | 1 26R   | 91 7D   | 299 36 | 347 19  | 120 23 |
| 16    | 354 45   | 261 49  | 358 13R | 353 41R | 91 34D  | 310 54 | 348 33  | 119 51 |
| 26    | 4 41     | 266 56  | 350 5   | 348 41D | 92 18   | 322 23 | 349 46  | 119 20 |
| April | 5 14 33  | 271 46  | 349 37D | 353 15  | 93 19   | 334 1  | 350 57  | 118 48 |
| 15    | 24 22    | 276 15  | 356 52  | 3 39    | 94 34   | 345 47 | 352 5   | 118 10 |
| ■ 5   | 34 8     | 280 16  | 8 57    | 16 19   | 96 2    | 357 37 | 353 10  | 117 44 |
| May   | 5 43 50  | 283 42  | 24 29   | 33 26   | 97 41   | 9 30   | 354 9   | 117 ■  |
| 15    | 53 30    | 286 25  | 43 11   | 53 28   | 99 30   | 21 27  | 355 ■   | 116 41 |
| 25    | 63 7     | 288 12  | 64 32   | 75 25   | 101 26  | 33 27  | 355 48  | 116 9  |
| June  | 4 72 42  | 288 55R | 85 45   | 95 11   | 103 28  | 45 ■   | 356 26  | 115 37 |
| 14    | 82 16    | 288 21  | 103 36  | 110 54  | 105 35  | 57 32  | 356 53  | 115 ■  |
| ■ 4   | 91 49    | 286 ■   | 117 5   | 121 57  | 107 45  | 69 38  | 357 16  | 114 ■  |
| July  | 4 101 21 | 284 1   | 125 23  | 127 6   | 109 58  | 81 46  | 357 26  | 114 ■  |
| 14    | 110 53   | 281 6   | 126 53R | 124 48R | 112 12  | 93 56  | 357 27R | 113 30 |
| 24    | 120 26   | 278 1   | 121 28  | 118 23  | 114 26  | 106 9  | 357 17  | 112 58 |
| Aug.  | ■ 129 59 | 277 12  | 116 28R | 117 14D | 116 39  | 118 25 | 358 ■   | 112 28 |
| 13    | 139 35   | 277 7D  | 120 47  | 126 56  | 118 50  | 130 44 | 358 30  | 111 55 |
| ■     | 149 12   | 278 24  | 135 ■   | 136 57  | 120 58  | 143 6  | 355 54  | 111 23 |
| Sep.  | 2 158 51 | 280 54  | 154 22  | 164 1   | 123 00  | 155 28 | 355 13  | 110 49 |
| 12    | 168 34   | 284 26  | 173 17  | 182 7   | 124 57  | 167 53 | 354 28  | 110 19 |
| 22    | 178 19   | 288 48  | 190 30  | 198 28  | 126 46  | 180 20 | 353 42  | 109 18 |
| Oct.  | ■ 188 ■  | 293 49  | 206 5   | 213 18  | 128 28  | 192 48 | 352 56  | 109 13 |
| 12    | 198 25   | 299 22  | 220 8   | 226 28  | 129 55  | 205 17 | 352 15  | 108 44 |
| 22    | 207 ■    | 305 19  | 232 5   | 236 37  | 131 12  | 217 10 | 351 59  | 108 13 |
| Nov.  | 1 217 55 | 311 35  | 239 19R | 239 2R  | 132 14  | 230 16 | 351 10  | 107 41 |
| 11    | 227 57   | 318 5   | 234 53  | 228 23  | 133 00  | 242 46 | 350 51  | 107 9  |
| 21    | 238 2    | 324 46  | 224 1   | 224 11D | 133 28  | 255 16 | 350 42  | 106 37 |
| Dec.  | 1 248 9  | 331 35  | 227 58D | 233 44  | 133 37R | 267 45 | 350 43D | 106 5  |
| 11    | 258 18   | 338 30  | 240 30  | 247 44  | 133 51  | 280 14 | 350 18  | 105 14 |
| 21    | 268 ■    | 345 29  | 255 11  | 262 48  | 132 56  | 292 47 | 351 18  | 105 ■  |
| 31    | 278 40   | 352 29  | 270 32  | —       | 132 8   | 305 9  | 351 51  | 104 30 |

Ayanamasa: 21° 6' 43"

## Longitude of the Moon

| 1907    | Sun.   | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  |        | 118 46 | 143 ■  | 118 57 | 194 36 | 222 25 | 251 40 |
| 13      | 281 43 | 311 29 | 330 57 | 6 42   | 31 53  | 56 1   | 79 41  |
| 27      | 103 26 | 127 38 | 152 32 |        |        |        |        |
| Feb. 1  |        |        |        |        |        |        | 165 18 |
| 3       | 191 29 | 218 39 | 240 48 | 275 44 | 304 58 | 333 45 | 1 20   |
| 17      | 27 24  | 52 6   | 75 38  | 99 ■■  | 123 44 | 148 41 |        |
| March 1 |        |        |        |        |        |        | 174 43 |
| 3       | 201 44 | 229 27 | 257 35 | 285 56 | 314 15 | 342 12 | 9 18   |
| 17      | 35 13  | 59 55  | 83 48  | 107 28 | 131 38 | 156 33 | 183 33 |
| 31      | 211 77 |        |        |        |        |        |        |
| April 1 |        |        |        |        | 225 42 | 254 20 | 280 44 |
| 7       | 310 40 | 338 4  | 4 49   | 30 45  | 55 44  | 79 51  | 107 30 |
| 21      | 127 18 | 151 58 | 178 7  | 205 57 | 235 ■  |        |        |
| May 1   |        |        |        |        |        | 264 32 | 293 27 |
| 5       | 321 23 | 348 19 | 14 23  | 39 40  | 64 13  | 88 7   | 111 42 |
| 19      | 135 28 | 160 ■  | 186 12 | 214 10 | 243 42 | 273 49 | 303 23 |
| June 1  |        |        |        | 317 41 | 345 14 | 11 27  | 36 38  |
| ■       | 61 3   | 91 57  | 108 32 | 132 11 | 156 20 | 181 35 | 208 26 |
| 23      | 237 7  | 267 10 | 297 30 | 326 58 |        |        |        |
| July 1  |        |        |        |        | 354 50 | 21 5   | 46 2   |
| 7       | 70 8   | 93 4■  | 117 24 | 141 13 | 165 36 | 190 56 | 217 38 |
| 21      | 245 55 | 275 35 | 305 49 | 335 29 | ■ 40   | 30 ■   |        |
| Aug. 1  |        |        | 42 41  | 67 3   | 90 46  | 114 21 | 138 14 |
| 11      | 162 41 | 187 56 | 214 7  | 241 27 | 269 57 | 299 24 | 329 4  |
| 25      | 357 38 | 25 23  | 51 ■   | 75 28  |        |        |        |
| Sep. 1  | 87 22  | 110 57 | 134 ■■ | 159 21 | 184 47 | 211 6  | 238 13 |
| 15      | 266 2  | 294 29 | 323 22 | 352 6  | 19 58  | 46 24  | 71 24  |
| 29      | 95 22  |        |        |        |        |        |        |
| Oct. 1  |        | 118 59 | 142 57 | 167 51 | 193 55 | 221 4  | 248 52 |
| 13      | 276 59 | 305 10 | 333 19 | 1 11   | 28 ■■  | 51 24  | 79 15  |
| 27      | 103 11 | 126 47 | 150 47 |        |        |        |        |
| Nov. 1  |        |        |        |        |        |        | 103 9  |
| 8       | 188 55 | 216 9  | 244 33 | 273 22 | 302 00 | 330 5  | 357 32 |
| 17      | 24 15  | ■ 9    | 75 8   | 99 17  | 122 55 | 146 36 | 170 59 |
| Dec. 1  | 196 ■■ | 224 11 | 253 9  | 282 50 | 312 15 | 340 ■■ | 7 57   |
| 15      | 34 ■   | ■ 17   | ■ ■    | 107 37 | 131 13 | 154 ■■ | 179 15 |
| ■       | 204 ■  | 232 2  |        |        |        |        |        |

Ayanamsa: 21° 6' 43"

## Longitudes of Planets

|       | 1908 | Sun.   | Mars.  | Merc.   | Merc.   | Jupit.  | Venus   | Saturn | Rahu   |
|-------|------|--------|--------|---------|---------|---------|---------|--------|--------|
| Jan.  | 5    | 283 46 | 356 00 | 278 24  | 286 25  | 131 38R | 311 21  | 352 11 | 104 14 |
|       | 15   | 293 67 | 3 2    | 294 37  | 303 1   | 130 38  | 323 45  | 352 56 | 103 42 |
|       | 25   | 304 8  | 10 8   | 311 38  | 320 20  | 129 11  | 336 4   | 353 50 | 103 11 |
| Feb.  | 4    | 314 17 | 17 3   | 328 53  | 336 38  | 127 51  | 348 19  | 354 50 | 102 39 |
|       | 14   | 324 25 | 24 1   | 342 20  | 345 2   | 126 35  | 0 28    | 355 55 | 102 13 |
|       | 24   | 334 30 | 30 57  | 343 29R | 338 53R | 125 27  | 12 29   | 357 4  | 101 35 |
| March | 6    | 345 34 | 38 31  | 333 11  | 330 48D | 124 28  | 25 30   | 358 23 | 101 00 |
|       | 16   | 355 31 | 45 21  | 331 5D  | 331 5   | 123 53  | 37 9    | 359 37 | 100 29 |
|       | 26   | 5 26   | 52 8   | 337 39  | 337 39  | 123 35  | 48 32   | 0 52   | 99 57  |
| April | 5    | 15 18  | 58 53  | 349 15  | 356 18  | 123 37  | 59 36   | 2 6    | 99 25  |
|       | 15   | 25 7   | 65 34  | 4 3     | 12 30   | 123 58  | 70 15   | 19     | 98 53  |
|       | 25   | 34 52  | 72 13  | 21 37   | 31 27   | 124 36  | 80 23   | 4 28   | 98 22  |
| May   | 5    | 44 34  | 78 49  | 41 53   | 52 44   | 125 30  | 89 47   | 5 34   | 97 50  |
|       | 15   | 54 14  | 85 33  | 43 28   | 73 34   | 126 39  | 98 11   | 6 35   | 97 18  |
|       | 25   | 63 51  | 90 54  | 82 37   | 90 27   | 128 1   | 105 7   | 7 30   | 96 46  |
| June  | 4    | 73 26  | 98 23  | 96 59   | 102 7   | 129 34  | 109 59  | 8 19   | 96 15  |
|       | 14   | 82 59  | 104 50 | 105 10  | 107 29R | 131 16  | 111 51R | 9 00   | 95 43  |
|       | 24   | 92 32  | 111 6  | 107 26R | 105 37  | 133 7   | 109 56  | 10 32  | 95 10  |
| July  | 4    | 102 4  | 117 40 | 102 44  | 99 52   | 135 4   | 104 40  | 9 55   | 94 39  |
|       | 14   | 111 36 | 124 1  | 98 16   | 98 44D  | 137 6   | 104 46  | 10 1   | 94 8   |
|       | 24   | 121 9  | 130 75 | 101 32D | 106 41  | 139 12  | 95 33   | 10 11R | 93 35  |
| Aug.  | 3    | 130 43 | 136 47 | 113 55  | 122 51  | 141 21  | 96 11   | 10 1   | 93 1   |
|       | 13   | 140 18 | 143 9  | 132 44  | 142 54  | 143 32  | 100 5   | 9 47   | 92 32  |
|       | 23   | 149 55 | 149 31 | 152 46  | 162 16  | 145 43  | 106 25  | 9 21   | 92 00  |
| Sep.  | 2    | 159 35 | 155 53 | 171 10  | 179 35  | 147 53  | 114 16  | 8 46   | 91 26  |
|       | 12   | 169 18 | 162 15 | 187 30  | 194 58  | 150 1   | 123 20  | 8 6    | 90 57  |
|       | 22   | 179 1  | 168 38 | 201 57  | 208 25  | 152 7   | 133 14  | 7 21   | 90 25  |
| Oct.  | 2    | 188 53 | 175 2  | 214 11  | 219 3   | 154 8   | 143 44  | 6 34   | 89 50  |
|       | 12   | 198 45 | 181 27 | 222 29R | 223 41R | 156 3   | 154 42  | 5 48   | 89 21  |
|       | 22   | 208 41 | 187 54 | 221 42  | 216 1   | 157 50  | 166 3   | 5 5    | 88 50  |
| Nov.  | 1    | 218 41 | 194 21 | 210 25  | 207 51  | 159 29  | 177 40  | 4 27   | 88 18  |
|       | 11   | 228 43 | 200 50 | 209 49D | 214 53  | 160 56  | 189 31  | 3 56   | 87 52  |
|       | 21   | 238 48 | 207 20 | 221 32  | 228 1   | 162 11  | 201 33  | 3 35   | 87 14  |
| Dec.  | 1    | 248 55 | 213 52 | 236 1   | 244 17  | 163 12  | 213 44  | 3 24D  | 86 1   |
|       | 11   | 259 1  | 220 25 | 243 3   | 261 26  | 163 57  | 226 00  | 3 24   | 85 11  |
|       | 21   | 269 15 | 227 00 | 267 44  | 275 41  | 164 23  | 238 21  | 3 34   | 85 39  |
|       | 31   | 279 27 | 233 36 | 282 45  | ---     | 164 31R | 250 45  | 3 55   | 85 7   |

Ayanamsa: 21° 7' 33"

## Longitude of the Moon

| 1908  | Sun. | Tues.  | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|-------|------|--------|--------|--------|--------|--------|--------|
| Jan.  | 1    |        |        |        |        | 246 20 | 276 1  |
|       | 5    | 306 20 | 336 4  | 4 23   | 31 5   | 56 20  | 80 40  |
|       | 19   | 128 6  | 151 08 | 175 54 | 200 46 | 226 52 | 254 34 |
| Feb.  | 1    |        |        | 299 2  | 329 29 | 359 6  | 26 59  |
|       | 9    | 53 2   | 77 39  | 101 27 | 125 2  | 148 47 | 172 57 |
|       | 23   | 223 20 | 250 1  | 278 3  | 307 25 |        | 197 44 |
| March | 1    | 322 25 | 352 33 | 21 24  | 48 35  | 73 59  | 98 8   |
|       | 15   | 145 26 | 169 40 | 194 38 | 220 21 | 246 51 | 274 10 |
|       | 29   | 331 30 | 0 48   |        |        |        |        |
| April | 1    |        |        |        |        | 15 15  | 43 9   |
|       | 5    | 69 26  | 111 12 | 118 3  | 141 42 | 165 48 | 190 46 |
|       | 19   | 243 35 | 271 41 | 299 2  | 327 23 | 355 54 | 24 5   |
| May   | 1    |        |        |        |        |        | 51 21  |
|       | 3    | 77 19  | 102 2  | 125 56 | 149 38 | 173 49 | 199 1  |
|       | 17   | 253 7  | 281 26 | 309 28 | 338 22 | 6 20   | 33 40  |
|       | 31   | 85 33  |        |        |        |        | 60 7   |
| June  | 1    |        |        |        | 97 53  | 122 00 | 145 42 |
|       | 7    | 169 35 | 194 14 | 220 11 | 247 40 | 276 26 | 305 47 |
|       | 21   | 3 14   | 30 29  | 56 40  | 81 55  | 106 23 |        |
| July  | 1    |        |        |        |        | 130 18 | 153 58 |
|       | 5    | 177 50 | 202 25 | 228 17 | 255 49 | 284 57 | 315 00 |
|       | 19   | 13 33  | 40 42  | 66 26  | 91 9   | 115 14 | 138 58 |
| Aug.  | 1    |        |        |        | 174 33 | 198 44 | 223 47 |
|       | 9    | 278 27 | 308 17 | 338 49 | 8 42   | 36 56  | 63 20  |
|       | 23   | 112 19 | 136 1  | 159 42 | 183 37 | 207 59 | 88 16  |
| Sep.  | 1    |        | 220 25 | 246 4  | 273 5  | 301 47 | 331 52 |
|       | 13   | 31 41  | 59 12  | 84 52  | 109 14 | 132 58 | 156 39 |
|       | 27   | 205 6  | 230 10 |        |        |        |        |
| Oct.  | 1    |        |        | 250 1  | 282 57 | 311 12 | 340 39 |
|       | 11   | 39 46  | 67 21  | 93 9   | 117 35 | 141 21 | 165 6  |
|       | 25   | 214 13 | 239 54 | 266 30 | 293 32 |        |        |
| Nov.  | 1    | 307 27 | 335 53 | 4 53   | 33 45  | 61 43  | 88 14  |
|       | 15   | 137 27 | 161 11 | 185 11 | 209 58 | 235 48 | 262 38 |
|       | 29   | 318 25 |        |        |        |        |        |
| Dec.  | 1    |        | 3      | 15 3   | 42 56  | 70 3   | 96 7   |
|       | 13   | 145 13 | 16 59  | 192 58 | 217 47 | 243 53 | 271 24 |
|       | 27   | 329 1  | 357 46 | 25 46  |        |        |        |

Ayanamsa: 21° 7' 33"



## Longitudes of Planets

|       | 1909 | Sun    | Mars    | Merc.   | Merc.   | Jupit.  | Venus  | Saturn | Rahu  |
|-------|------|--------|---------|---------|---------|---------|--------|--------|-------|
| Jan.  | 5    | 284 33 | 236 55  | 321 55  | 300 13  | 164 28R | 256 53 | 4 10D  | 84 51 |
|       | 15   | 294 44 | 243 33  | 308 29  | 315 22  | 164 7   | 269 25 | 4 46   | 84 10 |
|       | 25   | 304 53 | 250 13  | 323 14  | 327 42  | 164 28  | 281 53 | 5 31   | 83 48 |
| Feb.  | 4    | 315 4  | 256 53  | 328 17R | 324 35  | 164 32  | 294 22 | 5 23   | 83 16 |
|       | 14   | 325 11 | 263 35  | 318 53  | 314 36  | 161 24  | 306 50 | 7 23   | 82 44 |
|       | 24   | 335 16 | 270 17  | 313 17D | —       | 160 5   | 319 19 | 8 28   | 82 13 |
| March | 6    | 345 17 | 276 59  | 318 7   | 322 56  | 158 50  | 331 46 | 9 37   | 81 41 |
|       | 16   | 355 16 | 283 42  | 328 46  | 335 22  | 157 35  | 344 13 | 10 50  | 81 11 |
|       | 26   | 5 12   | 290 25  | 342 40  | 340 33  | 156 28  | 356 38 | 12 4   | 80 43 |
| April | 5    | 15 4   | 297 6   | 359 2   | 8 6     | 155 34  | 9 1    | 13 20  | 80 11 |
|       | 15   | 24 52  | 303 46  | 17 48   | 28 5    | 154 56  | 21 26  | 14 35  | 79 33 |
|       | 25   | 34 28  | 310 23  | 38 43   | 49 19   | 154 35R | 32 48  | 15 49  | 79 2  |
| May   | 5    | 44 22  | 316 55  | 59 15   | 59 1    | 154 33D | 46 1   | 17 00  | 78 30 |
|       | 15   | 54 00  | 323 24  | 75 21   | 81 5    | 154 40  | 58 27  | 18 11  | 77 58 |
|       | 25   | 63 37  | 329 41  | 91 7    | 87 18R  | 155 23  | 70 45  | 19 12  | 77 27 |
| June  | 4    | 73 12  | 335 51  | 87 34R  | 94 5    | 156 12  | 83 2   | 20 10  | 76 55 |
|       | 14   | 82 45  | 341 47  | 83 28   | 80 49   | 157 17  | 94 15  | 21 11  | 76 23 |
|       | 24   | 92 18  | 347 23  | 79 12D  | 79 20D  | 158 34  | 107 33 | 21 46  | 75 51 |
| July  | 4    | 101 56 | 352 44  | 81 29   | 85 38   | 160 1   | 119 47 | 22 22  | 75 19 |
|       | 14   | 111 23 | 357 12  | 91 41   | 99 22   | 161 41  | 132 00 | 22 57  | 74 41 |
|       | 24   | 120 53 | 1 9     | 108 44  | 118 55  | 163 27  | 144 12 | 23 7   | 74 16 |
| Aug.  | 3    | 130 29 | 11 12   | 129 22  | 138 55  | 164 21  | 156 21 | 24 14R | 73 44 |
|       | 13   | 140 4  | 6 9     | 149 16  | 158 22  | 167 20  | 168 29 | 23 10  | 73 12 |
|       | 23   | 149 42 | 6 48R   | 166 51  | 174 47  | 168 24  | 180 11 | 22 57  | 72 38 |
| Sep.  | 1    | 159 21 | 7 3     | 182 9   | 188 57  | 171 31  | 192 38 | 22 34  | 72 6  |
|       | 12   | 169 4  | 13      | 195 5   | 200 23  | 173 10  | 204 37 | 21 11  | 71 37 |
|       | 22   | 178 50 | 1 16    | 204 35  | 207 8   | 175 50  | 216 32 | 21 11  | 71 5  |
| Oct.  | 1    | 188 38 | 358 29  | 207 18R | 204 22  | 177 59  | 228 23 | 20 39  | 70 31 |
|       | 12   | 198 31 | 356 23  | 198 51  | 193 40D | 180 7   | 240 1  | 19 52  | 70 2  |
|       | 22   | 208 27 | 354 22  | 192 11D | 195 2   | 182 12  | 251 46 | 19 4   | 69 30 |
| Nov.  | 1    | 218 26 | 355 53D | 200 49  | 208 5   | 184 12  | 263 13 | 18 19  | 68 58 |
|       | 11   | 228 28 | 357 31  | 215 55  | 223 54  | 186 7   | 274 28 | 17 39  | 68 26 |
|       | 21   | 238 33 | 0 12    | 231 53  | 239 40  | 187 54  | 285 25 | 17 6   | 67 54 |
| Dec.  | 1    | 248 40 | 3 48    | 247 42  | 255 33  | 189 32  | 295 55 | 16 41  | 67 23 |
|       | 11   | 258 50 | 7 53    | 263 24  | 271 18  | 190 59  | 305 49 | 16 27  | 66 51 |
|       | 21   | 269 1  | 12 33   | 279 13  | 287 9   | 192 14  | 314 48 | 16 23D | 66 19 |
|       | 31   | 279 12 | 17 36   | 294 57  | —       | 193 14  | 322 27 | 16 30  | 65 48 |

Ayanamsa: 21° 8' 23"

## Longitude of the Moon

| 1909    | Sun.   | Tue.   | Thurs. | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  |        |        |        |        |        |        | 39 55  |
| 17      | 238 22 | 265 16 | 293 52 | 323 39 | 353 31 | 22 54  | 40 52  |
| 31      | 76 00  |        |        |        |        |        |        |
| Feb. 1  |        |        |        |        | 88 41  | 113 55 | 137 44 |
| 7       | 161 38 | 185 22 | 209 15 | 233 48 | 259 37 | 287 14 | 316 42 |
| 21      | 347 14 | 17 24  | 46 4   | 72 55  |        |        |        |
| March 1 |        |        |        |        | 98 16  | 122 41 | 146 55 |
| 7       | 170 26 | 194 12 | 218 13 | 242 41 | 268 29 | 295 47 | 324 55 |
| 21      | 355 21 | 25 46  | 54 49  | 81 57  | 107 23 | 131 42 |        |
| April 1 |        |        | 143 39 | 167 23 | 191 11 | 215 17 | 239 52 |
| 11      | 265 11 | 291 55 | 319 30 | 348 57 | 18 57  | 48 37  | 76 49  |
| 25      | 103 14 | 128 10 | 162 13 |        |        |        |        |
| May 1   |        |        |        | 175 57 | 199 52 | 224 17 | 249 29 |
| 9       | 275 14 | 302 2  | 329 52 | 358 40 | 27 56  | 56 55  | 84 44  |
| 23      | 111 13 | 136 15 | 160 22 | 184 9  | 208 10 |        |        |
| June 1  |        | 220 25 | 245 35 | 271 44 | 298 55 | 326 41 | 354 3  |
| 13      | 23 35  | 51 55  | 79 36  | 106 17 | 131 49 | 156 19 | 180 12 |
| 27      | 204 3  | 228 55 |        |        |        |        |        |
| July 1  |        |        | 253 55 | 280 44 | 308 55 | 337 55 | 6 7    |
| 11      | 34 24  | 62 00  | 88 50  | 114 52 | 140 1  | 164 22 | 188 12 |
| 25      | 211 59 | 236 22 | 261 57 | 289 10 |        |        |        |
| Aug. 1  | 303 23 | 232 40 | 2 14   | 31 9   | 58 56  | 85 35  | 111 20 |
| 15      | 136 22 | 160 46 | 184 39 | 208 20 | 232 15 | 257 3  | 282 54 |
| 29      | 311 39 | 341 29 |        |        |        |        |        |
| Sep. 1  |        |        |        |        |        | 356 39 | 26 40  |
| 5       | 55 25  | 82 35  | 108 24 | 133 18 | 157 36 | 181 29 | 205 10 |
| 19      | 228 54 | 253 8  | 278 31 | 305 36 | 334 38 | 5 3    |        |
| Oct. 1  |        |        |        |        |        |        | 35 31  |
| 3       | 64 43  | 92 8   | 117 56 | 142 36 | 166 38 | 190 22 | 214 5  |
| 17      | 237 59 | 262 24 | 287 47 | 314 39 | 343 14 | 13 14  | 43 36  |
| 31      | 73 8   |        |        |        |        |        |        |
| Nov. 1  |        |        |        |        | 87 10  | 114 00 | 139 17 |
| 7       | 163 30 | 187 15 | 210 58 | 234 58 | 259 30 | 284 47 | 311 5  |
| 21      | 338 33 | 7 17   | 30 51  | 56 25  | 85 00  |        |        |
| Dec. 1  |        |        |        |        |        | 123 3  | 147 30 |
| 11      | 171 49 | 195 33 | 219 19 | 243 35 | 268 40 | 294 40 | 321 34 |
| 19      | 349 13 | 17 31  | 46 12  | 74 55  | 102 53 | 129 47 | 155 19 |

Ayanamsa: 21° 8' 23"

## Longitudes of Planets

|       | 1910 | Sun    | Mars   | Mer.    | Mer.    | Jupit.  | Venus   | Saturn | Rahu  |
|-------|------|--------|--------|---------|---------|---------|---------|--------|-------|
| Jan.  | 5    | 284 18 | 20 15  | 302 17  | 303 22  | 193 15  | 325 35  | 16 38  | 65 32 |
|       | 15   | 294 30 | 25 43  | 312 12R | 311 30R | 194 14  | 329 54  | 17 11  | 65 00 |
|       | 25   | 304 40 | 31 24  | 306 9   | 300 37  | 194 31R | 330 46R | 17 35  | 64 28 |
| Feb.  | 4    | 314 49 | 37 13  | 297 11  | 296 49D | 194 29  | 327 35  | 18 18  | 63 56 |
|       | 14   | 324 56 | 43 9   | 297 15  | 303 27  | 194 6   | 321 42  | 19 9   | 63 25 |
|       | 24   | 335 46 | 48 10  | 308 51  | —       | 193 31  | 316 38  | 20 7   | 62 47 |
| March | 5    | 345 3  | 55 14  | 321 58  | 329 24  | 192 37  | 315 10  | 21 11  | 62 21 |
|       | 15   | 355 11 | 61 21  | 337 20  | 345 47  | 191 30  | 317 32  | 22 20  | 61 49 |
|       | 25   | 4 57   | 67 30  | 354 11  | 4 18    | 190 16  | 322 48  | 23 32  | 61 18 |
| April | 5    | 14 49  | 73 41  | 14 21   | 24 45   | 188 59  | 330 4   | 24 47  | 60 42 |
|       | 15   | 24 38  | 79 52  | 35 7    | 44 48   | 187 37  | 339 36  | 26 10  | 60 14 |
|       | 25   | 34 24  | 86 4   | 53 10   | 59 49   | 186 28  | 348 12  | 27 19  | 59 42 |
| May   | 5    | 44 11  | 92 16  | 64 32   | 67 10R  | 185 43  | 358 20  | 28 34  | 59 10 |
|       | 15   | 53 46  | 98 28  | 67 40R  | 68 18   | 185 4   | 8 55    | 29 48  | 58 38 |
|       | 25   | 63 23  | 104 41 | 63 42   | 61 1    | 184 42  | 19 50   | 30 58  | 58 7  |
| June  | 5    | 72 59  | 110 54 | 59 20D  | 59 19D  | 184 37D | 31 00   | 32 4   | 57 35 |
|       | 14   | 82 32  | 117 7  | 61 9    | 64 47   | 184 51  | 42 21   | 33 6   | —     |
|       | 24   | 92 4   | 123 21 | 70 11   | 76 53   | 185 22  | 53 51   | 34 1   | 57 3  |
| July  | 4    | 101 36 | 129 35 | 85 7    | 94 38   | 186 9   | 65 28   | 34 49  | 56 00 |
|       | 14   | 111 9  | 135 50 | 105 2   | 115 44  | 187 11  | 77 13   | 35 29  | 55 28 |
|       | 24   | 120 41 | 142 7  | 126 11  | 136 5   | 188 26  | 89 11   | 36 00  | 54 56 |
| Aug.  | 4    | 130 15 | 148 24 | 145 19  | 153 53  | 189 53  | 101 1   | 36 22  | 54 54 |
|       | 14   | 139 50 | 154 44 | 161 47  | 169 2   | 191 30  | 113 3   | 36 33  | 53 53 |
|       | 23   | 149 28 | 161 11 | 175 35  | 181 20  | 193 16  | 125 11  | 36 35R | 53 12 |
| Sep.  | 2    | 159 7  | 167 27 | 186 5   | 189 30  | 195 9   | 137 23  | 36 25  | 52 49 |
|       | 12   | 168 50 | 173 52 | 194 5R  | 190 10R | 197 11  | 149 41  | 36 11  | 52 17 |
|       | 22   | 178 36 | 180 20 | 186 28  | 181 5   | 199 12  | 162 2   | 35 37  | 51 46 |
| Oct.  | 2    | 188 25 | 186 50 | 176 57D | 176 37D | 201 19  | 174 27  | 35 00  | 51 14 |
|       | 12   | 198 17 | 193 23 | 180 20  | 188 44  | 203 28  | 186 55  | 34 17  | 52 48 |
|       | 22   | 208 12 | 199 58 | 194 36  | 202 54  | 205 39  | 199 25  | 33 30  | 52 46 |
| Nov.  | 1    | 218 12 | 206 37 | 211 15  | 219 29  | 207 49  | 211 57  | 32 42  | 51 17 |
|       | 11   | 228 14 | 213 20 | 227 35  | 235 32  | 209 58  | 224 30  | 31 55  | 49 7  |
|       | 21   | 238 18 | 220 5  | 243 24  | 251 10  | 212 11  | 237 4   | 31 12  | 48 35 |
| Dec.  | 1    | 248 26 | 226 54 | 258 54  | 266 34  | 214 5   | 249 39  | 30 36  | 48 11 |
|       | 11   | 258 35 | 233 46 | 274 8   | 281 28  | 216 00  | 262 14  | 30 8   | 47 29 |
|       | 21   | 268 44 | 240 42 | 288 11  | 293 36  | 217 48  | 274 48  | 29 49  | 47 00 |
|       | 31   | 278 57 | 247 41 | 296 17  | —       | 219 27  | 287 22  | 29 42  | 46 28 |

Avanamsa : 21° 9' 14"

1910 A.D.

## RAMAN'S EPHEMERIS

41

## Longitude of the Moon

| 1910    | Sun.   | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  |        |        |        | 167 37 | 191 36 | 215 17 | 239 19 |
| 9       | 264 17 | 290 27 | 317 51 | 345 58 | 14 19  | 42 32  | 70 27  |
| 23      | 97 56  | 124 45 | 150 36 | 175 25 | 199 22 |        |        |
| Feb. 1  |        | 211 13 | 234 57 | 259 24 | 285 13 | 312 38 | 341 21 |
| 13      | 10 32  | 39 20  | 67 19  | 94 27  | 120 50 | 146 29 | 171 23 |
| 27      | 195 32 |        |        |        |        |        |        |
| March 1 |        | 219 13 | 242 54 | 267 17 | 293 4  | 320 40 | 349 56 |
| 13      | 19 54  | 49 26  | 77 45  | 104 11 | 130 39 | 155 43 | 180 7  |
| 27      | 204 2  | 227 39 | 251 21 |        |        |        |        |
| April 1 |        |        |        |        |        |        | 263 25 |
| 3       | 288 20 | 314 50 | 343 15 | 13 11  | 43 33  | 73 7   | 101 9  |
| 17      | 127 36 | 152 48 | 177 8  | 200 59 | 224 36 | 248 19 | 272 27 |
| May 1   | 297 27 | 323 40 | 351 52 | 21 28  | 51 47  | 81 38  | 110 4  |
| 15      | 136 45 | 161 55 | 186 6  | 209 47 | 233 25 | 257 21 | 281 52 |
| 29      | 307 12 | 333 39 |        |        |        |        |        |
| June 1  |        |        |        |        |        | 347 22 | 15 47  |
| 5       | 45 16  | 75 11  | 104 17 | 132 00 | 158 2  | 182 40 | 206 30 |
| 19      | 230 7  | 254 4  | 278 42 | 304 11 | 330 34 | 357 51 |        |
| July 1  |        |        |        |        |        |        | 25 58  |
| 3       | 54 47  | 82 53  | 112 34 | 140 7  | 166 9  | 190 49 | 214 38 |
| 17      | 238 18 | 262 27 | 287 32 | 313 43 | 340 52 | 364 40 | 36 48  |
| 31      | 65 7   |        |        |        |        |        |        |
| Aug. 1  |        |        |        |        | 79 18  | 107 11 | 135 00 |
| 7       | 161 26 | 186 35 | 210 43 | 234 21 | 258 14 | 283 1  | 309 8  |
| 21      | 336 35 | 4 57   | 33 33  | 61 56  | 89 52  | 117 17 |        |
| Sep. 1  |        |        | 130 45 | 157 4  | 182 24 | 206 46 | 230 30 |
| 11      | 254 8  | 278 22 | 303 53 | 331 11 | 359 42 | 29 6   | 58 19  |
| 25      | 86 44  | 114 10 | 140 39 |        |        |        |        |
| Oct. 1  |        |        |        | 166 14 | 191 1  | 215 6  | 238 43 |
| 11      | 262 19 | 286 30 | 311 55 | 339 2  | 7 11   | 37 54  | 67 52  |
| 23      | 96 52  | 124 25 | 150 33 | 175 39 | 199 57 |        |        |
| Nov. 1  |        | 211 53 | 235 32 | 259 7  | 283 00 | 307 40 | 333 39 |
| 13      | 1 22   | 30 46  | 61 10  | 91 19  | 120 9  | 147 13 | 172 40 |
| 27      | 197 00 | 220 11 |        |        |        |        |        |
| Dec. 1  |        |        | 244 18 | 268 2  | 292 11 | 317 2  | 342 55 |
| 11      | 10 12  | 39 2   | 69 3   | 99 16  | 128 22 | 153 51 | 181 28 |
| 25      | 205 44 | 229 22 | 252 57 | 276 11 |        |        |        |

Ayanamsa: 21° 9' 14"

## Longitudes of Planets

| 1911  | Sun       | Mars   | Merc.   | Mero.   | Jupit.  | Venus   | Saturn | Rahn  |
|-------|-----------|--------|---------|---------|---------|---------|--------|-------|
| Jan.  | ■ 284 2   | 251 12 | 204 42R | ■ 50R   | 220 13  | 293 39  | 29 42  | 46 12 |
|       | 15 294 14 | 258 17 | 283 00D | ■ 17D   | 221 34  | 306 13  | 29 52  | 45 41 |
|       | 25 304 25 | 260 25 | 281 ■   | 284 ■   | 222 43  | 318 45  | 30 12  | 45 8  |
| Feb.  | 4 314 ■   | 272 34 | 289 22  | 295 15  | 223 36  | 331 16  | 30 43  | 44 36 |
|       | 14 324 41 | 279 51 | 301 49  | 308 53  | 224 12  | 343 44  | 31 23  | 44 5  |
|       | 24 334 10 | 287 ■  | 316 25  | 324 22  | 224 31R | 356 10  | ■ 12   | 43 38 |
| March | 6 344 18  | 294 ■  | 332 46  | 341 37  | 224 31  | 8 33    | 33 8   | 43 1  |
|       | 16 354 47 | 301 51 | 350 ■   | 0 43    | 224 12  | 20 51   | 34 11  | 42 29 |
|       | 26 4 43   | 309 16 | 10 49   | 20 53   | 223 35  | 33 15   | 35 18  | 41 58 |
| April | 5 14 35   | 316 42 | 30 14   | 38 6    | 222 42  | 45 14   | 36 30  | 41 26 |
|       | 15 24 24  | 324 9  | 43 56   | 47 24R  | 221 37  | 57 16   | 37 45  | 40 34 |
|       | 25 34 10  | 331 37 | 41 19R  | 47 2    | 220 24R | 69 12   | 39 1   | 40 34 |
| May   | ■ 43 52   | 339 3  | 44 15   | 41 16   | 219 ■   | 80 59   | 40 18  | 39 51 |
|       | 15 53 32  | 346 28 | 30 15D  | 38 58D  | 217 54  | 92 37   | 41 35  | 39 19 |
|       | 25 63 9   | 353 51 | 40 33   | 43 51   | 216 47  | 104 4   | 42 50  | 38 47 |
| June  | ■ 72 45   | 1 10   | 42 41   | 54 51   | 215 51  | 115 17  | 44 2   | 38 15 |
|       | 14 82 18  | 8 23   | 62 16   | 70 52   | 215 10  | 126 15  | 45 11  | 37 11 |
|       | 24 91 51  | 15 30  | 80 34   | 91 6    | 214 46R | 136 44  | 46 15  | 37 12 |
| July  | ■ 101 23  | 22 27  | 101 58  | 112 36  | 214 44D | 146 49  | 47 14  | 36 40 |
|       | 14 110 55 | 29 14  | 122 41  | 132 1   | 214 52  | 156 13  | 48 6   | 36 8  |
|       | 24 120 28 | 35 47  | 140 36  | 148 26  | 215 21  | 166 41  | 48 30  | 35 37 |
| Aug.  | ■ 130 1   | 42 3   | 155 29  | 161 43  | 216 7   | 171 49  | 49 26  | 34 11 |
|       | 13 139 36 | 48 00  | 166 59  | 171 30  | 217 8   | 177 1   | 49 52  | 33 38 |
|       | 23 149 14 | 53 32  | 173 35R | 173 53R | 218 22  | 179 25R | 50 8   | 32 1  |
| Sep.  | ■ 158 53  | 58 32  | 172 7   | 187 56  | 219 ■   | 178 10  | 50 14R | 31 30 |
|       | 12 168 36 | 62 57  | 163 6   | 160 15D | 221 27  | 173 21  | 50 9   | 32 57 |
|       | 22 178 21 | 66 34  | 161 7D  | 165 39  | 223 14  | 167 24  | 49 53  | 32 26 |
| Oct.  | 2 188 10  | 69 11  | 172 45  | 181 ■   | 225 8   | 163 ■   | 49 28  | 31 54 |
|       | 12 198 2  | 70 43  | 189 51  | 198 32  | 227 9   | 164 00D | 48 54  | 31 23 |
|       | 22 207 58 | 70 50R | 207 3   | 215 19  | 229 15  | 167 48  | 48 13  | 30 50 |
| Nov.  | 1 217 57  | 69 29  | 215 22  | 231 14  | 231 24  | 174 ■   | 47 26  | 30 19 |
|       | 11 227 59 | 66 47  | 238 56  | 240 30  | 233 36  | 182 7   | 46 35  | 29 47 |
|       | 21 237 1  | 63 13  | 253 55  | 261 8   | 235 49  | 191 25  | 45 50  | 29 16 |
| Dec.  | 1 248 11  | 59 32  | 267 59  | 274 5   | 238 2   | 201 14  | 45 5   | 28 43 |
|       | 11 258 20 | 56 33  | 278 42R | 280 29R | 240 14  | 212 19  | 44 25  | 28 12 |
|       | 21 268 31 | 54 45  | 277 53  | 271 35  | 242 22  | 223 30  | 43 54  | 27 40 |
|       | 31 278 43 | 54 20D | 265 57  | -       | 244 26  | 235 1   | 43 12  | 27 8  |

## Longitude of the Moon

|       | 1911 | Sun.   | Tues.  | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|-------|------|--------|--------|--------|--------|--------|--------|--------|
| Jan.  | 1    | 289 9  | 314 7  | 339 50 | 6 27   | 34 6   | 53 53  | 92 27  |
|       | 15   | 121 56 | 150 17 | 176 55 | 201 54 | 225 49 | 249 23 | 273 17 |
|       | 29   | 297 56 | 323 31 |        |        |        |        |        |
| Feb.  | 1    |        |        |        |        |        | 336 38 | 3 25   |
|       | 5    | 30 49  | 58 48  | 87 20  | 116 6  | 144 26 | 171 37 | 197 20 |
|       | 19   | 221 55 | 245 28 | 269 12 | 293 35 | 319 6  |        |        |
| March | 1    |        |        |        |        |        | 345 49 | 13 26  |
|       | 5    | 41 55  | 69 55  | 97 59  | 125 57 | 153 21 | 179 50 | 205 12 |
|       | 19   | 229 32 | 253 17 | 277 5  | 301 27 | 327 7  | 354 16 | 22 39  |
| April | 1    |        |        |        | 37 7   | 66 9   | 94 49  | 122 44 |
|       | 5    | 149 55 | 175 57 | 201 13 | 225 39 | 249 31 | 273 11 | 297 11 |
|       | 23   | 322 7  | 348 30 | 16 32  | 45 55  |        |        |        |
| May   | 1    |        |        |        |        | 75 48  | 105 6  | 133 14 |
|       | 7    | 169 59 | 185 33 | 210 13 | 234 17 | 258 1  | 281 42 | 305 44 |
|       | 21   | 330 55 | 356 48 | 24 42  | 54 13  | 84 34  | 114 30 |        |
|       | 31   | 65 33  |        |        |        |        |        |        |
| June  | 1    |        |        | 128 55 | 156 37 | 182 35 | 207 18 | 231 18 |
|       | 11   | 254 55 | 278 41 | 302 40 | 327 11 | 352 37 | 19 24  | 47 56  |
|       | 25   | 77 44  | 108 11 | 137 49 |        |        |        |        |
| July  | 1    |        |        |        | 165 42 | 191 44 | 216 20 | 240 11 |
|       | 9    | 263 49 | 287 39 | 311 55 | 336 46 | 2 25   | 29 7   | 57 11  |
|       | 23   | 55 35  | 116 55 | 146 9  | 174 7  | 200 15 |        |        |
| Aug.  | 1    |        | 212 43 | 236 52 | 260 33 | 284 21 | 308 41 | 333 42 |
|       | 13   | 359 27 | 25 53  | 53 22  | 81 45  | 110 54 | 140 5  | 168 33 |
|       | 27   | 195 27 | 220 47 | 244 59 |        |        |        |        |
| Sep.  | 1    |        |        |        |        |        |        | 256 52 |
|       | 3    | 280 37 | 304 49 | 329 51 | 355 51 | 22 43  | 50 15  | 78 19  |
|       | 17   | 106 45 | 135 15 | 163 18 | 190 23 | 216 12 | 240 50 | 264 45 |
| Oct.  | 1    | 288 31 | 312 46 | 338 5  | 4 33   | 32 14  | 60 39  | 82 18  |
|       | 15   | 117 55 | 145 36 | 172 45 | 199 1  | 224 21 | 248 48 | 272 40 |
|       | 29   | 296 24 | 320 36 |        |        |        |        |        |
| Nov.  | 1    |        |        |        |        |        | 333 3  | 358 59 |
|       | 5    | 26 31  | 55 25  | 84 59  | 114 14 | 142 31 | 169 34 | 195 33 |
|       | 19   | 220 40 | 245 6  | 269 3  | 292 46 | 316 36 | 341 5  |        |
| Dec.  | 1    |        |        |        |        |        |        | 6 40   |
|       | 3    | 34 18  | 63 33  | 93 52  | 123 56 | 152 40 | 179 41 | 205 16 |
|       | 17   | 229 52 | 253 56 | 277 43 | 301 27 | 325 20 | 349 45 | 15 15  |
|       | 31   | 42 23  |        |        |        |        |        |        |

Ayanamasa: 21° 10' 4"

## Longitudes of Planets

|       | 1912 | Sun.   | Mars.  | Mer.    | Mer.    | Jupit.  | Venus  | Saturn | Rahu  |
|-------|------|--------|--------|---------|---------|---------|--------|--------|-------|
| Jan.  | 5    | 283 48 | 54 11  | 501 12D | 211 3   | 245 26  | 240 51 | 43 24R | 21 03 |
|       | 15   | 294 00 | 55 00  | 270 12  | 275 43  | 247 21  | 252 41 | 43 18R | 21 21 |
|       | 25   | 304 11 | 55 11  | 282 00  | 286 51  | 248 7   | 254 50 | 43 24D | 25 41 |
| Feb.  | 5    | 314 20 | 61 33  | 296 6   | 302 43  | 249 44  | 276 48 | 43 40  | 25 17 |
|       | 14   | 324 27 | 65 17  | 311 30  | 319 57  | 252 11  | 288 52 | 44 7   | 24 13 |
|       | 24   | 334 32 | 69 33  | 326 27  | 337 44  | 254 20  | 301 11 | 44 44  | 24 14 |
| March | 5    | 344 34 | 74 9   | 347 13  | 356 58  | 254 17  | 313 17 | 45 30  | 24 43 |
|       | 15   | 354 38 | 79 11  | 6 38    | 15 35   | 254 57  | 325 31 | 46 24  | 23 10 |
|       | 25   | 4 29   | 84 10  | 22 53   | 27 45   | 255 19  | 337 47 | 47 25  | 22 38 |
| April | 4    | 14 21  | 89 22  | 29 43   | 28 50R  | 255 23R | 349 3  | 48 31  | 22 8  |
|       | 14   | 24 19  | 94 56  | 25 54R  | 22 20   | 255 8   | 3 19   | 49 42  | 21 53 |
|       | 24   | 33 56  | 100 30 | 19 42   | 18 53D  | 254 35  | 14 23  | 50 56  | 21 11 |
| May   | 4    | 43 38  | 106 10 | 20 3    | 23 11   | 253 46  | 26 51  | 52 13  | 20 31 |
|       | 14   | 53 18  | 111 55 | 27 20   | 33 13   | 252 43  | 39 0   | 53 30  | 19 58 |
|       | 24   | 62 55  | 117 45 | 40 2    | 47 54   | 251 32R | 51 22  | 54 47  | 19 28 |
| June  | 3    | 72 31  | 123 39 | 56 44   | 58 44   | 250 10  | 63 37  | 56 11  | 18 55 |
|       | 13   | 82 4   | 129 36 | 77 8    | 88 11   | 249 1   | 75 53  | 57 18  | 18 24 |
|       | 23   | 91 37  | 135 36 | 98 53   | 109 4   | 247 52  | 88 10  | 58 29  | 17 53 |
| July  | 3    | 101 9  | 141 40 | 118 27  | 128 59  | 246 54R | 100 27 | 59 36  | 17 21 |
|       | 13   | 110 41 | 147 47 | 134 55  | 141 25  | 246 10  | 112 45 | 60 38  | 16 49 |
|       | 23   | 120 14 | 153 57 | 147 12  | 151 51  | 245 42R | 125 3  | 61 34  | 16 17 |
| Aug.  | 2    | 129 47 | 160 11 | 155 5   | 156 23R | 245 33R | 137 23 | 62 22  | 15 45 |
|       | 12   | 139 22 | 166 28 | 155 53R | 153 2   | 245 42D | 149 43 | 63 2   | 15 13 |
|       | 22   | 149 00 | 172 49 | 148 48  | 144 11  | 246 9   | 162 4  | 63 34  | 14 41 |
| Sep.  | 1    | 158 39 | 179 14 | 143 37  | 145 41D | 246 53  | 174 75 | 63 55  | 14 10 |
|       | 11   | 168 22 | 185 42 | 151 1   | 153 41  | 247 53  | 186 45 | 64 5   | 13 38 |
|       | 21   | 178 7  | 192 15 | 167 32  | 176 42  | 249 11  | 199 11 | 64 6R  | 13 7  |
| Oct.  | 1    | 187 56 | 198 52 | 185 46  | 194 33  | 250 35  | 211 26 | 63 54  | 12 34 |
|       | 11   | 197 48 | 200 11 | 203 00  | 211 9   | 252 14  | 223 45 | 63 33  | 12 3  |
|       | 21   | 207 43 | 212 19 | 219 2   | 226 40  | 254 3   | 236 11 | 63 2   | 11 31 |
|       | 31   | 217 42 | 219 11 | 234 5   | 241 16  | 255 59  | 248 20 | 62 23  | 10 59 |
| Nov.  | 10   | 227 44 | 226 4  | 248 7   | 254 27  | 258 3   | 260 35 | 61 38  | 10 27 |
|       | 20   | 237 49 | 233 4  | 259 14  | 269 41R | 260 12  | 272 48 | 60 50  | 9 56  |
|       | 30   | 247 56 | 240 8  | 264 29R | 280 11  | 262 25  | 284 58 | 60 1   | 9 24  |
| Dec.  | 10   | 258 11 | 247 18 | 274 11  | 249 21D | 264 41  | 297 5  | 59 14  | 8 52  |
|       | 20   | 268 18 | 254 11 | 289 26D | 251 22  | 266 58  | 309 11 | 58 32  | 8 20  |
|       | 30   | 278 23 | 261 50 | 296 15  | —       | 269 11  | 320 17 | 57 57  | 7 49  |

Ayanamso: 21° 10' 11"



1912 A.D.

# RAMAN'S EPHEMERIS Longitude of the Moon

45

| 1912    | Sun.   | Tue.   | Thurs. | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  |        |        |        |        | 34 41  | 86 34  | 117 17 |
| 7       | 147 20 | 175 39 | 202 2  | 229 56 | 250 59 | 274 43 | 298 27 |
| 21      | 322 24 | 346 44 | 11 44  | 37 50  | 65 30  | 94 51  |        |
| Feb. 1  |        |        | 11 59  | 140 24 | 169 52 | 197 31 | 223 18 |
| 11      | 247 46 | 271 42 | 295 18 | 319 15 | 344 44 | 370 18 | 395 42 |
| 21      | 322 24 | 346 44 | 11 57  |        |        |        |        |
| March 1 |        |        |        |        |        |        | 133 48 |
| 3       | 163 19 | 191 44 | 218 31 | 243 45 | 267 55 | 291 40 | 315 34 |
| 17      | 340 4  | 5 21   | 31 31  | 58 31  | 84 17  | 114 41 | 143 26 |
| 31      | 172 00 |        |        |        |        |        |        |
| April 1 |        |        |        |        | 186 1  | 213 12 | 239 4  |
| 7       | 344 46 | 287 44 | 311 32 | 335 47 | 0 57   | 27 17  | 54 44  |
| 21      | 82 57  | 111 19 | 139 52 | 167 50 | 195 8  |        |        |
| May 1   |        |        |        |        |        | 221 35 | 247 5  |
| 8       | 271 46 | 295 30 | 319 03 | 343 40 | 8 56   | 35 40  | 63 52  |
| 19      | 340 4  | 122 15 | 150 47 | 178 19 | 204 53 | 230 36 | 255 36 |
| June 1  |        |        |        | 267 50 | 291 55 | 316 40 | 339 33 |
| 8       | 4 10   | 39 8   | 67 53  | 87 16  | 117 21 | 146 54 | 175 11 |
| 23      | 201 55 | 227 32 | 252 21 | 276 38 |        |        |        |
| July 1  |        |        |        |        | 300 31 | 324 14 | 348 7  |
| 7       | 12 29  | 38 31  | 64 12  | 90 43  | 126 13 | 156 17 | 184 52 |
| 21      | 211 43 | 237 8  | 261 37 | 285 37 | 309 24 | 333 11 |        |
| Aug. 1  |        |        | 345 6  | 9 21   | 34 29  | 61 11  | 89 26  |
| 11      | 119 23 | 149 52 | 179 32 | 207 30 | 233 42 | 258 33 | 282 37 |
| 25      | 306 23 | 330 10 | 354 15 | 18 50  |        |        |        |
| Sep. 1  | 31 25  | 57 22  | 84 40  | 113 11 | 143 13 | 173 5  | 201 57 |
| 15      | 229 10 | 254 47 | 279 13 | 303 11 | 328 10 | 300 56 | 15 42  |
| 29      | 41 15  |        |        |        |        |        |        |
| Oct. 1  |        | 67 43  | 95 8   | 123 29 | 152 30 | 181 34 | 209 38 |
| 13      | 237 6  | 262 47 | 287 18 | 311 8  | 334 56 | 359 11 | 24 11  |
| 27      | 50 48  | 78 5   | 106 2  |        |        |        |        |
| Nov. 1  |        |        |        |        |        |        | 120 9  |
| 3       | 148 29 | 176 46 | 204 41 | 231 52 | 258 00 | 283 00 | 307 11 |
| 17      | 330 48 | 354 46 | 19 40  | 45 56  | 73 37  | 102 14 | 131 11 |
| Dec. 1  | 159 28 | 187 12 | 214 6  | 240 39 | 268 11 | 294 1  | 318 1  |
| 15      | 338 39 | 2 32   | 27 22  | 53 47  | 82 00  | 111 29 | 141 11 |
| 29      | 170 6  | 197 48 |        |        |        |        |        |

Ayanamasa: 21° 10' 54"

## Longitudes of Planets

|       | 1913 | Sun    | Mars   | Merc.   | Merc.   | Jupit.  | Venus  | Saturn | Rahu   |
|-------|------|--------|--------|---------|---------|---------|--------|--------|--------|
| Jan.  | 1    | 226 35 | 266 15 | 263 15  | 270 24  | 270 37  | 328 00 | 57 40R | 7 29   |
|       | 15   | 221 46 | 273 41 | 277 34  | 285 1   | 272 51  | 339 11 | 57 20  | 6 57   |
|       | 25   | 224 57 | 281 10 | 282 44  | 300 42  | 275 1   | 350 47 | 57 10  | 6 26   |
| Feb.  | 4    | 217 6  | 288 41 | 288 58  | 317 33  | 277 7   | 1 37   | 57 13D | 5 54   |
|       | 14   | 212 13 | 294 19 | 326 27  | 335 40  | 279 6   | 11 55  | 57 26  | 5 23   |
|       | 24   | 236 18 | 303 58 | 345 1   | 354 13  | 280 57  | 21 58  | 57 50  | 4 51   |
| March | 6    | 345 20 | 311 39 | 3 23    | 8 33    | 282 38  | 29 50  | 58 24  | 4 19   |
|       | 16   | 355 19 | 319 23 | 11 40R  | 11 23   | 284 7   | 29 41  | 59 8   | 3 47   |
|       | 26   | 5 14   | 327 7  | 8 17    | 1 7     | 285 24  | 41 12  | 60 00  | 3 15   |
| April | 5    | 15 6   | 334 51 | 0 49    | 359 33  | 286 15  | 42 27R | 60 59  | 2 43   |
|       | 15   | 24 55  | 341 35 | 0 28D   | 3 16    | 287 12  | 39 45  | 61 1   | 2 9    |
|       | 25   | 34 40  | 350 19 | 7 36    | 13 9    | 287 40  | 53 59  | 63 14  | 1 40   |
| May   | 5    | 44 22  | 358 00 | 10 11   | 27 11   | 287 50  | 28 26R | 64 27  | 1 8    |
|       | 15   | 54 2   | 5 38   | 35 29   | 44 41   | 287 41R | 26 1   | 35 43  | 0 37   |
|       | 25   | 63 39  | 13 13  | 54 41   | 65 23   | 287 14  | 27 36D | 67 1   | 0 5    |
| June  | 4    | 73 14  | 20 44  | 76 22   | 87 7    | 286 30  | 32 11  | 68 19  | 359 33 |
|       | 14   | 82 48  | 28 9   | 97 12   | 106 11  | 285 31  | 38 54  | 69 36  | 359 01 |
|       | 24   | 92 20  | 35 28  | 114 33  | 121 44  | 284 21  | 47 1   | 70 11  | 358 29 |
| July  | 1    | 101 52 | 42 40  | 127 50  | 132 45  | 283 5   | 56 14  | 72 5R  | 357 57 |
|       | 11   | 111 25 | 49 44  | 136 16  | 138 4R  | 281 49  | 66 6   | 73 14  | 357 26 |
|       | 21   | 120 57 | 56 39  | 137 55R | 135 46  | 280 37  | 76 23  | 74 18  | 356 54 |
| Aug.  | 1    | 130 31 | 63 24  | 132 12  | 128 37  | 279 35  | 87 16  | 75 16  | 356 23 |
|       | 11   | 140 6  | 69 57  | 126 41  | 127 29D | 278 10  | 98 11  | 76 8   | 355 51 |
|       | 21   | 149 44 | 76 55  | 131 21  | 137 55  | 278 14  | 109 43 | 76 52  | 355 19 |
| Sep.  | 1    | 159 24 | 82 23  | 146 23  | 155 47  | 278 1   | 121 18 | 77 27  | 354 47 |
|       | 11   | 169 1  | 88 12  | 153 22  | 174 43  | 278 6D  | 133 3  | 77 52  | 354 15 |
|       | 21   | 178 52 | 93 40  | 183 41  | 192 15  | 278 31  | 144 59 | 78 1   | 353 44 |
| Oct.  | 1    | 188 41 | 98 45  | 200 27  | 208 17  | 279 13  | 157 8  | 78 10R | 353 12 |
|       | 11   | 198 33 | 103 21 | 215 49  | 223 1   | 280 12  | 169 15 | 78 3   | 352 40 |
|       | 21   | 208 29 | 107 21 | 229 51  | 236 13  | 281 27  | 181 82 | 77 45  | 352 8  |
| Nov.  | 1    | 218 28 | 110 39 | 241 52  | 242 20  | 282 55  | 193 55 | 77 17  | 351 36 |
|       | 11   | 228 30 | 113 3  | 248 41  | 247 45R | 284 36  | 206 22 | 76 41  | 351 1  |
|       | 21   | 238 35 | 114 22 | 242 44  | 236 13  | 286 27  | 218 53 | 75 57  | 350 33 |
| Dec.  | 1    | 248 31 | 114 25 | 232 47  | 233 49D | 288 26  | 231 23 | 75 9   | 350 1  |
|       | 11   | 258 53 | 113 1  | 237 58  | 243 48  | 290 33  | 243 57 | 74 20  | 349 29 |
|       | 21   | 269 2  | 110 23 | 250 29  | 257 37  | 292 46  | 256 31 | 73 32  | 348 51 |
|       | 31   | 279 14 | 106 43 | 265 1   | -       | 295 8   | 269 5  | 72 48  | 348 26 |

## Longitude of the Moon

| 1913    | Sun.   | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  |        |        |        |        |        | 211 13 | 237 19 |
| 5       | 262 39 | 287 20 | 311 11 | 335 5  | 358 2  | 22 52  | 48 16  |
| 19      | 75 30  | 104 33 | 134 57 | 165 8  | 193 59 | 221 16 | 247 10 |
| Feb. 1  |        |        |        | 259 42 | 284 14 | 308 15 | 331 57 |
| 9       | 355 33 | 19 27  | 44 7   | 70 10  | 98 3   | 127 40 | 158 11 |
| 23      | 188 16 | 216 52 | 243 43 |        |        |        |        |
| March 1 |        |        |        | 269 2  | 293 21 | 317 7  | 340 45 |
| 9       | 4 30   | 28 41  | 53 36  | 79 40  | 107 11 | 136 13 | 166 14 |
| 23      | 196 13 | 225 4  | 252 14 | 277 44 | 302 3  |        |        |
| April 1 |        | 313 56 | 337 32 | 1 19   | 25 36  | 50 39  | 76 35  |
| 13      | 103 30 | 131 29 | 160 24 | 189 47 | 218 51 | 246 50 | 273 15 |
| 27      | 298 12 | 322 10 |        |        |        |        |        |
| May 1   |        |        | 345 48 | 9 43   | 34 24  | 60 6   | 86 46  |
| 11      | 114 13 | 142 14 | 170 38 | 199 11 | 227 29 | 254 57 | 281 11 |
| 25      | 306 7  | 330 6  | 353 45 | 17 47  |        |        |        |
| June 1  | 30 7   | 55 45  | 82 42  | 110 38 | 139 2  | 167 24 | 195 30 |
| 15      | 223 13 | 250 22 | 276 30 | 301 53 | 336 9  | 349 50 | 13 35  |
| 29      | 38 6   |        |        |        |        |        |        |
| July 1  |        | 63 59  | 91 28  | 120 12 | 149 13 | 178 13 | 206 18 |
| 13      | 233 32 | 259 57 | 285 33 | 310 19 | 334 21 | 357 59 | 21 42  |
| 27      | 46 12  | 72 6   | 99 47  |        |        |        |        |
| Aug. 1  |        |        |        |        |        |        | 114 14 |
| 3       | 143 56 | 173 44 | 202 43 | 230 27 | 256 56 | 282 24 | 307 2  |
| 17      | 331 3  | 354 42 | 18 19  | 42 21  | 67 25  | 94 3   | 122 29 |
| 31      | 152 21 |        |        |        |        |        |        |
| Sep. 1  |        |        |        |        | 167 31 | 197 35 | 226 26 |
| 7       | 253 41 | 279 26 | 304 5  | 329 2  | 351 41 | 15 19  | 39 15  |
| 21      | 63 52  | 89 11  | 116 48 | 145 39 | 175 42 |        |        |
| Oct. 1  |        |        |        |        |        | 205 57 | 235 12 |
| 5       | 291 44 | 316 11 | 343 4  | 370 53 | 0 25   | 24 13  | 48 32  |
| 19      | 11 31  | 36 22  | 61 11  | 86 44  | 111 10 | 214 2  | 243 18 |
| Nov. 1  |        |        |        | 257 23 | 284 14 | 309 25 | 333 27 |
| 11      | 357 11 | 20 48  | 45 11  | 70 24  | 96 26  | 123 13 | 150 46 |
| 21      | 179 6  | 204 11 | 237 4  | 265 18 |        |        |        |
| Dec. 1  |        |        |        |        | 292 7  | 317 21 | 341 26 |
| 7       | 5 2    | 30 11  | 54 35  | 79 12  | 104 12 | 133 43 | 161 40 |
| 11      | 189 47 | 218 11 | 246 8  | 273 37 | 299 59 | 325 6  |        |

Ayanamsa: 21° 11' 45"

## Longitudes of Planets

| 1914  | Sun         | Mars    | Merc.   | Merc.   | Jupit.  | Venus   | Saturn | Rahu   |
|-------|-------------|---------|---------|---------|---------|---------|--------|--------|
| Jan.  | ■ 284 20    | 104 43R | 272 35  | 280 20  | 296 12  | 275 22  | 72 28R | 348 10 |
|       | 11 ■ 284 31 | 100 55  | 288 16  | ■ 25    | 298 33  | 287 57  | 71 54  | 347 38 |
|       | 25 ■ 284 42 | 97 00   | 304 48  | 313 24  | 300 55  | 300 31  | 71 30  | 347 6  |
| Feb.  | 4 ■ 314 51  | 96 8    | 322 18  | 331 15  | 303 16  | 314 20  | 71 16  | 346 34 |
|       | 14 ■ 324 58 | 95 41D  | 339 11  | 347 32  | 305 35  | 325 37  | 71 13D | 346 8  |
|       | 24 ■ 331 ■  | 96 27   | 352 54R | —R      | 307 51  | 338 8   | 71 27  | 346 31 |
| March | 6 ■ 345 5   | 98 16   | 352 53  | ■ 25    | 310 2   | 350 18  | 71 41  | 344 59 |
|       | 16 ■ 345 ■  | 100 54  | 343 04  | 341 21D | 312 8   | 3 5     | 72 12  | 344 27 |
|       | 26 ■ 4 59   | 104 13  | 341 17D | 343 24  | 314 ■   | 15 31   | 72 51  | 343 58 |
| April | ■ 14 52     | 104 ■   | 347 13  | 352 19  | 315 55  | 27 54   | 73 40  | 343 21 |
|       | 15 ■ 24 40  | 112 19  | 358 10  | 5 ■     | 317 33  | 40 14   | 74 36  | 342 52 |
|       | 25 ■ 24 26  | 116 50  | 13 10   | 21 39   | 319 00  | 52 32   | 75 38  | 342 20 |
| May   | 5 ■ 44 8    | 121 48  | 30 53   | 40 51   | 320 13  | 01 47   | 76 46  | 341 41 |
|       | 15 ■ 53 48  | 126 55  | 51 27   | ■ 32    | 321 10  | 76 ■    | 77 58  | 341 17 |
|       | 25 ■ 53 23  | 132 13  | 51 6    | ■ ■     | 321 51  | 89 7    | 79 13  | 340 45 |
| June  | ■ 73 25     | 137 41  | 92 10   | 100 4   | 322 13  | 101 12  | 80 30  | 340 13 |
|       | 14 ■ 73 11  | 143 17  | 106 11  | 112 12  | 322 17R | 113 12  | 81 49  | 339 42 |
|       | 24 ■ 92 7   | 149 1   | 116 12  | 118 34R | 322 1   | 125 ■   | 83 6   | 339 10 |
| July  | 4 ■ 101 39  | 154 52  | 119 4R  | 117 40  | 321 27  | 136 59  | 84 23  | 338 38 |
|       | 14 ■ 111 11 | 160 40  | 114 49  | 111 34  | 320 37  | 148 ■   | 85 38  | 338 6  |
|       | 24 ■ 120 44 | 166 53  | ■ 18D   | 109 4D  | 319 32  | 160 20  | 86 ■   | 337 11 |
| Aug.  | 3 ■ 130 17  | 173 8   | 111 23  | 116 16  | 318 13  | 171 48  | 87 57  | 337 ■  |
|       | 13 ■ 139 52 | 179 19  | 123 27  | 132 20  | 317 1   | 183 ■   | 88 58  | 336 31 |
|       | 23 ■ 149 30 | 185 40  | 142 8   | 152 ■   | 315 ■   | 194 6   | 89 54  | 335 59 |
| Sep.  | 2 ■ 159 10  | 192 8   | 161 48  | 170 59  | 314 ■   | 204 ■   | 90 42  | 335 28 |
|       | 12 ■ 168 52 | 198 41  | 179 ■   | 188 1   | 313 37  | 215 9   | 91 21  | 334 55 |
|       | 22 ■ 178 38 | 203 50  | 195 52  | 203 19  | 312 55  | 224 55  | 91 51  | 334 24 |
| Oct.  | 2 ■ 188 27  | 212 14  | 210 21  | 216 54  | 312 ■   | 233 55  | ■ 11   | 333 52 |
|       | 12 ■ 194 19 | 218 55  | 222 50  | 227 54  | 312 28D | 241 47  | ■ 20R  | 333 20 |
|       | 22 ■ 208 15 | 225 01  | 231 34R | 232 59R | 312 44  | 247 ■   | ■ 17   | 332 ■  |
| Nov.  | 1 ■ 218 14  | 232 54  | 231 2   | 225 32  | 313 15  | 251 41  | 92 ■   | 332 17 |
|       | 11 ■ 228 16 | 240 ■   | 247 ■   | 216 59D | 314 13  | 251 54R | 91 40  | 331 45 |
|       | 21 ■ 238 21 | 247 16  | 218 57D | 223 53  | 315 23  | 248 16  | ■ 7    | 331 7  |
| Dec.  | 1 ■ 248 28  | 254 36  | 230 20  | 237 29  | 316 48  | 243 23  | 90 26  | 330 41 |
|       | 11 ■ 258 37 | 262 00  | 244 57  | 252 34  | 318 27  | 237 54  | 89 40  | 330 10 |
|       | 21 ■ 268 45 | 269 30  | 260 16  | 263 ■   | 320 17  | 237 12D | 88 51  | 329 38 |
|       | 31 ■ 278 59 | 277 5   | 265 57  | —       | 322 14  | 240 15  | ■ ■    | 329 6  |

Ayanamsa: 21° 12' 35"

## Longitude of the Moon

| 1914    | Sun.   | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  |        |        | 337 15 | 1 1    | 24 40  | 48 56  | 74 23  |
| 11      | 101 16 | 129 15 | 158 00 | 186 37 | 214 50 | 242 29 | 269 28 |
| 25      | 186 23 | 220 50 | 345 10 | 5 53   |        |        |        |
| Feb. 1  | 20 41  | 44 31  | 69 16  | 95 27  | 123 19 | 152 28 | 182 5  |
| 15      | 211 15 | 239 14 | 266 22 | 292 16 | 317 18 | 341 34 | 5 21   |
| March 1 | 28 53  | 52 48  | 77 27  | 103 55 | 131 10 | 160 32 | 189 47 |
| 15      | 220 18 | 247 23 | 276 24 | 301 58 | 326 29 | 350 23 | 14 2   |
| 29      | 37 42  | 61 40  |        |        |        |        |        |
| April 1 |        |        |        |        |        | 73 13  | 99 4   |
| 5       | 125 37 | 153 52 | 183 40 | 214 10 | 244 3  | 272 18 | 298 40 |
| 19      | 323 31 | 347 28 | 11 3   | 34 44  | 58 45  | 83 19  |        |
| May 1   |        |        |        |        |        |        | 108 50 |
| 3       | 135 6  | 162 56 | 192 14 | 222 25 | 252 18 | 280 48 | 307 15 |
| 17      | 237 12 | 258 7  | 19 41  | 43 31  | 67 53  | 92 54  | 118 43 |
| 31      | 145 21 |        |        |        |        |        |        |
| June 1  |        |        |        |        | 159 3  | 187 15 | 216 28 |
| 7       | 147 1  | 274 58 | 297 21 | 328 4  | 352 55 | 16 11  | 39 56  |
| 21      | 64 15  | 89 58  | 115 53 | 142 17 | 168 43 |        |        |
| July 1  |        |        |        |        |        | 197 56 | 226 34 |
| 5       | 255 17 | 282 27 | 310 25 | 338 59 | 36 23  | 24 16  | 48 0   |
| 19      | 72 24  | 96 09  | 124 42 | 152 30 | 180 33 | 208 58 | 237 19 |
| Aug. 1  |        |        |        | 231 22 | 259 1  | 286 43 | 321 33 |
| 9       | 258 18 | 281 14 | 308 58 | 336 4  | 363 7  | 119 31 | 147 20 |
| 23      | 176 11 | 203 50 | 234 17 | 262 4  | 289 2  |        |        |
| Sep. 1  |        | 231 19 | 257 41 | 283 53 | 16 31  | 43 15  | 64 3   |
| 13      | 258 29 | 114 6  | 141 30 | 170 12 | 200 5  | 227 54 | 255 41 |
| 27      | 288 1  | 311 58 |        |        |        |        |        |
| Oct. 1  |        |        | 336 55 | 1 12   | 33 5   | 48 47  | 73 37  |
| 11      | 50 58  | 122 34 | 149 24 | 176 16 | 203 31 | 230 53 | 258 17 |
| 25      | 224 47 | 251 55 | 278 11 | 10 9   |        |        |        |
| Nov. 1  | 25 2   | 52 45  | 80 37  | 93 43  | 118 38 | 144 35 | 172 8  |
| 15      | 201 37 | 231 55 | 262 13 | 291 1  | 317 51 | 343 00 | 7 8    |
| 29      | 30 49  | 58 58  | 78 40  | 108 18 | 133 22 | 158 54 | 181 40 |
| Dec. 1  |        |        |        | 206 56 | 236 00 | 261 19 | 15 21  |
| 13      | 210 23 | 240 12 | 270 9  |        |        |        |        |
| 27      | 28 14  | 51 4   | 87 25  |        |        |        |        |

Ayanamso: 21° 12' 35"

## Longitudes of Planets

| 1915  | Sun       | Mars   | Merc.   | Merc.   | Jupit.  | Venus  | Saturn  | Rahu   |
|-------|-----------|--------|---------|---------|---------|--------|---------|--------|
| Jan.  | 5 234 5   | 280 51 | 293 59  | 292 10  | 323 19  | 242 53 | 87 38R  | 328 50 |
|       | 15 234 16 | 288 34 | 300 32  | 309 2   | 325 30  | 249 49 | 85 54   | 328 18 |
|       | 25 234 27 | 296 18 | 317 55  | 325 41  | 327 46  | 258 18 | 86 17   | 327 47 |
| Feb.  | 4 314 36  | 304 1  | 332 40  | 337 12  | 330 7   | 267 50 | 85 48   | 327 15 |
|       | 14 314 44 | 311 54 | 337 51R | 334 27  | 332 30  | 278 5  | 85 30   | 326 43 |
|       | 24 334 49 | 319 45 | 329 4   | —       | 334 54  | 288 00 | 85 22   | 326 12 |
| March | 6 344 10  | 327 37 | 323 16  | 324 23D | 337 19  | 299 56 | 85 26   | 325 39 |
|       | 16 354 50 | 335 28 | 327 31  | 332 7   | 339 42  | 311 18 | 85 41   | 325 8  |
|       | 26 354 42 | 343 19 | 337 48  | 344 20  | 342 3   | 322 51 | 86 7    | 324 36 |
| April | 5 14 37   | 351 9  | 357 35  | 350 30  | 344 20  | 334 31 | 86 42   | 324 5  |
|       | 15 24 28  | 358 57 | 3 3     | 17 15   | 346 32  | 346 10 | 87 27   | 323 32 |
|       | 25 34 12  | 6 41   | 27 7    | 37 34   | 348 37  | 358 10 | 88 19   | 323 1  |
| May   | 5 43 55   | 14 22  | 48 21   | 58 59   | 350 35  | 10 5   | 89 19   | 322 29 |
|       | 15 53 34  | 21 59  | 68 54   | 77 41   | 352 23  | 22 3   | 90 24   | 321 51 |
|       | 25 63 12  | 29 32  | 85 8    | 91 9    | 354 00  | 34 1   | 91 34   | 321 25 |
| June  | 4 72 47   | 36 59  | 105 11  | 115 24  | 355 25  | 46 6   | 92 48   | 320 53 |
|       | 14 82 21  | 44 20  | 99 20R  | 98 25R  | 356 36  | 58 10  | 94 4    | 320 22 |
|       | 24 91 53  | 51 36  | 96 3    | 93 8    | 357 31  | 70 16  | 95 22   | 319 50 |
| July  | 4 101 25  | 58 45  | 90 54D  | 90 17D  | 358 9   | 82 23  | 96 40   | 339 18 |
|       | 14 110 57 | 65 47  | 91 47   | 101 29  | 358 28  | 94 36  | 97 57   | 318 47 |
|       | 24 120 30 | 72 42  | 101 18  | 109 2   | 358 28R | 106 49 | 99 13   | 318 15 |
| Aug.  | 3 130 3   | 79 39  | 118 10  | 128 23  | 358 9   | 119 5  | 100 26  | 317 37 |
|       | 13 139 39 | 86 9   | 138 40  | 148 11  | 357 30  | 131 24 | 101 36  | 317 11 |
|       | 23 149 11 | 92 40  | 158 1   | 167 3   | 356 35  | 143 45 | 102 41  | 316 40 |
| Sep.  | 2 158 55  | 99 1   | 175 25  | 183 17  | 355 27  | 156 8  | 103 39  | 316 5  |
|       | 12 168 38 | 105 12 | 190 23  | 197 28  | 354 10  | 168 34 | 104 31  | 315 36 |
|       | 22 178 24 | 111 12 | 203 42  | 209 10  | 352 50  | 181 1  | 105 14  | 315 14 |
| Oct.  | 2 188 12  | 116 59 | 213 35  | 216 23  | 351 34  | 193 29 | 105 49  | 314 33 |
|       | 12 198 1  | 122 32 | 216 47R | 213 54  | 350 26  | 205 57 | 106 14  | 314 1  |
|       | 22 208 7  | 127 48 | 208 11  | 202 49D | 349 32  | 218 27 | 106 27  | 313 29 |
| Nov.  | 1 217 50  | 132 43 | 201 21  | 204 13  | 348 55  | 230 56 | 106 30R | 312 57 |
|       | 11 228 1  | 137 14 | 209 53  | 216 55  | 348 38  | 243 26 | 106 22  | 312 25 |
|       | 21 238 1  | 141 16 | 224 32  | 232 20  | 348 41D | 255 55 | 106 2   | 311 54 |
| Dec.  | 1 248 13  | 144 42 | 240 11  | 248 1   | 349 5   | 268 24 | 105 33  | 311 22 |
|       | 11 258 22 | 147 23 | 255 51  | 263 43  | 349 49  | 280 53 | 104 55  | 310 50 |
|       | 21 268 33 | 149 9  | 271 38  | 279 38  | 350 50  | 293 21 | 104 11  | 310 19 |
|       | 31 278 44 | 149 49 | 287 44  | —       | 352 8   | 305 47 | 103 23  | 309 46 |

Ayanamsa: 21° 13' 25"

## Longitude of the Moon

| 1915    | Sun.   | Tue.   | Thurs. | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  |        |        |        |        |        |        | 99 50  |
| 1       | 125 15 | 151 24 | 178 21 | 206 12 | 234 54 | 264 12 | 292 48 |
| 17      | 320 26 | 348 35 | 11 23  | 35 21  | 59 6   | 83 15  | 108 15 |
| 31      | 134 16 |        |        |        |        |        |        |
| Feb. 1  |        |        |        |        | 147 39 | 175 3  | 203 11 |
| 7       | 231 23 | 259 53 | 287 49 | 315 12 | 341 35 | 6 51   | 31 11  |
| 21      | 55 00  | 78 53  | 103 26 | 129 10 |        |        |        |
| March 1 |        |        |        |        | 156 18 | 184 11 | 213 34 |
| 7       | 242 24 | 270 11 | 297 56 | 324 26 | 350 6  | 14 59  | 39 11  |
| 21      | 62 59  | 86 48  | 111 16 | 136 58 | 164 22 | 133 21 |        |
| April 1 |        |        | 208 15 | 238 6  | 267 10 | 294 55 | 321 21 |
| 11      | 346 47 | 11 30  | 35 41  | 59 32  | 83 15  | 107 15 | 132 7  |
| 25      | 158 30 | 186 47 | 216 43 |        |        |        |        |
| May 1   |        |        |        | 247 12 | 276 53 | 304 54 | 331 14 |
| 9       | 356 20 | 20 39  | 44 35  | 68 19  | 92 5   | 116 10 | 141 1  |
| 23      | 167 14 | 195 16 | 225 3  | 255 41 | 285 41 |        |        |
| June 1  |        | 500 6  | 327 30 | 353 13 | 17 44  | 41 39  | 65 23  |
| 13      | 89 11  | 113 17 | 137 56 | 163 32 | 190 29 | 219 11 | 248 58 |
| 27      | 279 80 | 211 26 |        |        |        |        |        |
| July 1  |        |        | 336 1  | 1 53   | 26 28  | 11 22  | 74 6   |
| 11      | 98 4   | 122 31 | 147 40 | 173 42 | 200 48 | 229 11 | 258 16 |
| 25      | 287 45 | 316 10 | 344 11 | 10 3   |        |        |        |
| Aug. 1  | 22 31  | 46 45  | 70 31  | 94 25  | 118 54 | 144 13 | 170 30 |
| 15      | 197 42 | 225 11 | 254 6  | 282 45 | 311 8  | 338 45 | 5 13   |
| 29      | 30 27  | 54 42  |        |        |        |        |        |
| Sep. 1  |        |        |        |        |        | 66 37  | 90 24  |
| 5       | 114 28 | 139 50 | 165 18 | 193 57 | 222 19 | 250 53 | 279 11 |
| 19      | 307 00 | 334 11 | 0 35   | 26 4   | 50 38  | 74 32  |        |
| Oct. 1  |        |        |        |        |        |        | 98 15  |
| 11      | 122 27 | 147 47 | 174 41 | 200 7  | 232 26 | 261 39 | 290 11 |
| 17      | 317 25 | 343 53 | 9 34   | 34 11  | 58 52  | 82 40  | 106 19 |
| 31      | 130 11 |        |        |        |        |        |        |
| Nov. 1  |        |        |        |        | 142 51 | 168 11 | 196 50 |
| 7       | 226 25 | 256 36 | 286 11 | 314 14 | 340 55 | 6 50   | 31 17  |
| 21      | 55 32  | 79 22  | 103 00 | 126 47 | 151 11 |        |        |
| Dec. 1  |        |        |        |        |        | 177 7  | 204 51 |
| 5       | 114 26 | 264 59 | 295 6  | 323 43 | 350 35 | 16 1   | 40 36  |
| 19      | 64 27  | 88 9   | 111 52 | 135 50 | 160 26 | 186 12 | 213 34 |

Ayanamsa: 21° 13' 25"



## Longitudes of Planets

| 1916  | Sun       | Mars.   | Merc.   | Merc.   | Jupit. | Venus   | Saturn  | Rahu   |
|-------|-----------|---------|---------|---------|--------|---------|---------|--------|
| Jan.  | ■ 283 49  | 149 41R | 295 52  | 303 55  | 352 52 | 312 00  | 102 58R | 300 31 |
| 15    | 294 1     | 148 44  | 311 25  | 317 47  | 354 31 | 324 22  | 102 9   | 308 58 |
| 23    | 304 12    | 145 55  | 321 26R | 320 53R | 356 21 | 336 41  | 101 23  | 308 27 |
| Feb.  | ■ 314 21  | 142 16  | 316 13  | 310 25  | 358 21 | 348 55  | 100 42  | 307 55 |
| 14    | 324 29    | 138 18  | 306 49  | 306 23D | 0 29   | 1 ■     | 100 10  | 307 24 |
| 24    | 334 34    | 134 46  | 308 33D | 312 32  | 2 43   | 13 2    | 99 47   | 306 52 |
| March | 5 344 35  | 131 59  | 317 45  | 323 53  | 5 2    | 24 51   | 99 35   | 306 20 |
| 15    | 354 35    | 130 34  | 330 43  | 338 8   | 7 25   | 36 28   | 99 34D  | 305 42 |
| 25    | 4 31      | 130 25D | 346 8   | 354 41  | 9 49   | 47 50   | 99 43   | 305 18 |
| April | 4 14 23   | 131 26  | 3 49    | 13 32   | 12 14  | 58 51   | 100 4   | 304 44 |
| 14    | 24 12     | 133 26  | 23 47   | 34 21   | 14 39  | 69 28   | 100 35  | 304 11 |
| 24    | 33 58     | 136 13  | 44 48   | 54 30   | 17 2   | 79 31   | 101 16  | 303 41 |
| May   | ■ 43 41   | 139 40  | 62 55   | 69 45   | 19 22  | 88 49   | 102 5   | 303 9  |
| 14    | 53 20     | 143 38  | 74 50   | 78 2    | 21 38  | 97 3    | 103 1   | 302 38 |
| 24    | 62 58     | 148 1   | 79 16R  | 78 34R  | 23 48  | 103 47  | 104 3   | 302 06 |
| June  | ■ 72 33   | 152 45  | 76 24   | 73 39   | 25 52  | 108 18  | 105 11  | 301 34 |
| 13    | ■ 7       | 157 48  | 71 28D  | 70 49D  | 27 48  | 109 42R | 106 23  | 301 2  |
| 23    | 91 39     | 163 5   | 71 53   | 74 57   | 29 35  | 107 16  | 107 37  | 300 31 |
| July  | 3 101 11  | 168 35  | 79 52   | 86 29   | 31 10  | 101 43  | 108 54  | 299 58 |
| 13    | 110 43    | 174 18  | 94 41   | 104 13  | 32 33  | 96 1    | 110 12  | 299 27 |
| 23    | 120 16    | 180 10  | 114 34  | 125 ■   | 33 41  | 93 17   | 111 30  | 298 55 |
| Aug.  | ■ 129 50  | 186 13  | 135 24  | 145 6   | 34 34  | 94 24D  | 112 46  | 298 13 |
| 12    | 139 25    | 192 25  | 154 10  | 162 36  | 35 ■   | 91 39   | 114 1   | 297 51 |
| ■     | 149 2     | 198 45  | 170 27  | 177 41  | 35 24  | 105 11  | 115 12  | 297 20 |
| Sep.  | 1 168 42  | 205 14  | 184 17  | 190 9   | 35 19R | 113 16  | 116 19  | 296 48 |
| 11    | 168 ■     | 211 51  | 195 6   | 198 46  | 34 55  | 122 27  | 117 20  | 296 16 |
| 21    | 178 10    | 218 35  | 200 37R | 199 57R | 34 12  | 132 25  | 118 15  | 295 44 |
| Oct.  | 1 187 58  | 225 28  | 196 16  | 190 39  | 33 13  | 142 59  | 119 3   | 295 18 |
| 11    | 197 50    | 232 27  | 186 15D | 185 52D | 32 1   | 153 59  | 119 41  | 294 41 |
| 21    | 207 46    | 239 34  | 189 35  | 195 56  | 30 41  | 163 21  | 120 10  | 294 9  |
| 31    | 217 45    | 246 47  | 203 83  | —       | 29 20  | 177 1   | 120 29  | 293 37 |
| Nov.  | 10 227 47 | 254 7   | 219 45  | 227 50  | ■      | 188 53  | 120 35R | 292 5  |
| 20    | 237 51    | 261 33  | 235 49  | 243 43  | ■ 59   | 200 18  | 120 ■   | 291 34 |
| 30    | 247 ■     | 269 5   | 251 14  | —       | ■ 9    | 213 7   | 120 17  | 292 ■  |
| Dec.  | 10 ■ 8    | 276 42  | 267 12  | 273 1   | ■ 9    | 213 7   | 120 17  | 292 ■  |
| 20    | ■ 14 ■    | 284 34  | 282 46  | 280 20  | 25 37  | 225 23  | 119 ■   | 291 51 |
| 30    | 278 30    | 292 10  | 297 18  | —       | 25 25  | 237 45  | 119 ■   | 290 58 |
|       |           |         |         |         | 25 35D | 250 9   | 118 36  | 290 21 |

Ayanamsa: 21° 14' 16"

1916 A.D.

## RAMAN'S EPHEMERIS

53

Longitude of the Moon

| 1916  | Sun. | Tues.  | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|-------|------|--------|--------|--------|--------|--------|--------|
| Jan.  | 1    |        |        | 227 54 | 257 42 | 288 6  | 317 50 |
|       | 9    | 345 59 | 12 22  | 61 70  | 85 1   | 108 45 | 132 50 |
|       | 23   | 217 30 | 183 00 | 209 35 | 237 26 | 266 29 |        |
| Feb.  | 1    | 281 18 | 311 00 | 339 57 | 7 25   | 33 14  | 57 45  |
|       | 13   | 81 32  | 105 12 | 154 7  | 179 52 | 206 32 | 233 59 |
|       | 27   | 262 9  | 290 49 |        |        |        |        |
| March | 1    |        |        |        |        | 305 14 | 333 53 |
|       | 5    | 1 44   | 28 19  | 53 30  | 77 38  | 101 18 | 125 11 |
|       | 19   | 175 46 | 202 50 | 230 43 | 258 59 | 287 13 | 315 19 |
| April | 1    |        |        | 356 43 | 23 24  | 48 59  | 73 20  |
|       | 9    | 97 18  | 120 59 | 145 16 | 170 46 | 197 50 | 226 13 |
|       | 23   | 284 00 | 312 9  | 339 35 | 6 17   |        | 255 12 |
| May   | 1    |        |        |        | 32 14  | 57 20  | 81 37  |
|       | 7    | 105 19 | 128 58 | 153 13 | 178 45 | 206 3  | 234 58 |
|       | 21   | 294 14 | 322 44 | 350 1  | 16 14  | 41 33  | 66 8   |
| June  | 1    |        | 78 11  | 101 57 | 125 31 | 149 22 | 174 8  |
|       | 11   | 200 26 | 228 35 | 258 18 | 288 35 | 318 14 | 346 30 |
|       | 25   | 38 39  | 63 10  | 87 5   |        |        | 13 13  |
| July  | 1    |        |        | 110 42 | 134 18 | 158 17 | 183 7  |
|       | 9    | 209 17 | 237 10 | 266 39 | 296 59 | 326 59 | 355 39 |
|       | 23   | 37 57  | 72 15  | 95 57  | 119 32 | 143 20 | 22 35  |
| Aug.  | 1    |        | 155 24 | 180 3  | 205 39 | 232 31 | 260 48 |
|       | 13   | 320 22 | 349 51 | 17 53  | 44 9   | 68 55  | 92 47  |
|       | 27   | 140 10 | 154 35 | 189 46 |        |        | 116 21 |
| Sep.  | 1    |        |        |        |        |        | 203 41 |
|       | 3    | 229 12 | 256 39 | 285 5  | 314 16 | 343 35 | 12 11  |
|       | 17   | 64 52  | 89 8   | 112 46 | 136 30 | 160 53 | 186 14 |
| Oct.  | 1    | 239 44 | 267 26 | 295 35 | 324 3  | 352 32 | 20 29  |
|       | 15   | 72 44  | 97 00  | 120 39 | 144 26 | 169 00 | 194 49 |
|       | 29   | 249 55 | 278 16 |        |        |        | 231 55 |
| Nov.  | 1    |        |        |        |        | 292 26 | 320 37 |
|       | 5    | 348 30 | 15 56  | 42 36  | 68 16  | 92 52  | 116 41 |
|       | 19   | 184 22 | 189 36 | 216 24 | 244 40 | 273 49 | 302 57 |
| Dec.  | 1    |        |        |        |        |        | 331 28 |
|       | 3    | 359 6  | 25 51  | 51 44  | 76 46  | 101 2  | 124 46 |
|       | 17   | 172 23 | 197 29 | 224 12 | 253 41 | 282 25 | 312 24 |
|       | 31   | 9 27   |        |        |        |        | 341 26 |

Ayanamso: 21° 14' 16"

# RAMAN'S EPHEMERIS Longitudes of Planets

1917 A.D.

|       | 1917 | Sun    | Mars   | Mero.   | Merc.   | Jupit. | Venus  | Saturn  | Rahu   |
|-------|------|--------|--------|---------|---------|--------|--------|---------|--------|
| Jan.  | 5    | 284 37 | 296 51 | 303 42R | 305 40R | 25 51  | 257 37 | 118 8R  | 290 8  |
|       | 15   | 294 11 | 304 41 | 303     | 297 1   | 26 32  | 270 4  | 117 20  | 289 36 |
|       | 25   | 304 59 | 311 11 | 291 39  | 292 39  | 27 32  | 282 33 | 116 30  | 289 1  |
| Feb.  | 5    | 315    | 320 28 | 290 53D | 294 22D | 28 48  | 295    | 115 43  | 288 32 |
|       | 15   | 325 15 | 328 23 | 299 18  | 305 12  | 30 18  | 307 30 | 115 1   | 288 00 |
|       | 24   | 335 20 | 336 17 | 311 43  | —       | 32 00  | 319 59 | 114 20  | 287 29 |
| March | 6    | 345 21 | 344 10 | 326 35  | 334 42  | 33 53  | 332 27 | 114 1   | 286 57 |
|       | 16   | 355 20 | 351 1  | 341 17  | 352 11  | 35 55  | 344 53 | 113 31  | 286 25 |
|       | 26   | 1 16   | 359 50 | 2 1     | 12 6    | 38 4   | 357 19 | 113 35D | 285 54 |
| April | 5    | 15     | 7 35   | 22 25   | 32 30   | 40 18  | 9 44   | 113 45  | 285 22 |
|       | 15   | 24 56  | 16 6   | 41 39   | 49 15   | 42 36  | 22 7   | 114 2   | 284 50 |
|       | 25   | 34 42  | 22 54  | 54 52   | 58 19   | 44 56  | 34 29  | 114 29  | 284 18 |
| May   | 5    | 44 24  | 30 26  | 66 30R  | 68 34R  | 47 19  | 46 49  | 115 6   | 283 46 |
|       | 15   | 54 4   | 37 54  | 56      | 53 16   | 49 41  | 59 8   | 115 52  | 283 14 |
|       | 25   | 63 41  | 45 16  | 51 10   | 50 38D  | 52 3   | 71 26  | 116 45  | 282 42 |
| June  | 4    | 73 16  | 52 33  | 51 56   | 55 1    | 54 23  | 83 47  | 117 45  | 282 11 |
|       | 14   | 82 50  | 59 45  | 59 43   | 65 54   | 56 38  | 95 55  | 118 50  | 281 11 |
|       | 24   | 92 23  | 66 50  | 73 11   | 82 15   | 58 55  | 108 13 | 120 00  | 281 7  |
| July  | 4    | 101 55 | 73 50  | 92 12   | 102 50  | 60 57  | 120 27 | 121 13  | 280 36 |
|       | 14   | 111 27 | 80 44  | 113 36  | 128 59  | 62 56  | 132 40 | 122 19  | 280 1  |
|       | 24   | 120 59 | 87 32  | 133 44  | 142 47  | 64 47  | 144 51 | 123 46  | 279 22 |
| Aug.  | 3    | 130 33 | 94 15  | 151 7   | 158 45  | 66 28  | 157 00 | 125 3   | 279 00 |
|       | 13   | 140 8  | 100 51 | 165 41  | 171 50  | 67 57  | 169 17 | 126 20  | 278 11 |
|       | 23   | 149 46 | 107 21 | 177 4   | 181 7   | 69 13  | 181 12 | 127 35  | 277 57 |
| Sep.  | 2    | 159 25 | 113 45 | 183 35  | 184 56R | 70 14  | 193 14 | 128 47  | 277 25 |
|       | 12   | 169 8  | 120 2  | 181 38R | 177 1   | 70 59  | 205 11 | 129 56  | 276 51 |
|       | 22   | 178 54 | 126 13 | 172 1   | 169 32  | 71 25  | 217 5  | 130 59  | 276 21 |
| Oct.  | 2    | 188 43 | 132 15 | 171 6D  | 176 14D | 71 31R | 228 54 | 131 56  | 275 50 |
|       | 12   | 198 35 | 138 10 | 183 33  | 191 49  | 71 17  | 240 37 | 132 41  | 275 18 |
|       | 22   | 208 31 | 143 55 | 200 21  | 208 48  | 70 43  | 252 12 | 133 27  | 274 44 |
| Nov.  | 1    | 218 30 | 149 29 | 217 5   | 225 12  | 69 52  | 263 36 | 133 51  | 274 15 |
|       | 11   | 228 32 | 154 51 | 233 1   | 240 57  | 68 46  | 274 46 | 134 20  | 273 51 |
|       | 21   | 238 37 | 159 59 | 241 40  | 256 18  | 67 29  | 285 36 | 134 31  | 273 11 |
| Dec.  | 1    | 248 44 | 164 49 | 263 49  | 271 9   | 66 7   | 296 40 | 134 31R | 272 50 |
|       | 11   | 258 54 | 169 18 | 278 7   | 284 14  | 64 48  | 305 41 | 134 19  | 272 7  |
|       | 21   | 269 5  | 173 22 | 288 23  | 299 53R | 63 35  | 314 23 | 133 57  | 271 35 |
|       | 31   | 279 16 | 178 54 | 305 55R | —       | 62 37  | 321 37 | 133 25  | 271 4  |

Ayanamasa: 21° 15' 6"

1917 A.D.

## RAMAN'S EPHEMERIS

Longitude of the Moon

| 1917    | Sun.   | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  |        |        |        |        | 22 51  | 48 41  | 73 32  |
| 7       | 97 42  | 121 27 | 145 3  | 168 52 | 193 19 | 218 58 | 246 14 |
| 21      | 275 16 | 305 31 | 335 49 | 5 1    | 32 27  | 58 13  |        |
| Feb. 1  |        |        | 70 36  | 94 43  | 118 24 | 142 1  | 165 51 |
| 11      | 190 10 | 215 15 | 241 28 | 269 10 | 298 25 | 328 40 | 358 46 |
| 25      | 27 30  | 54 20  |        |        |        |        |        |
| March 1 |        |        | 79 28  | 103 29 | 127 4  | 150 45 | 174 53 |
| 11      | 199 39 | 225 8  | 251 29 | 278 54 | 307 32 | 337 8  | 6 49   |
| 25      | 35 30  | 62 28  | 87 43  | 111 48 |        |        |        |
| April 1 | 123 37 | 147 15 | 171 20 | 196 13 | 221 57 | 248 27 | 275 39 |
| 15      | 303 34 | 332 9  | 1 6    | 20 42  | 57 11  | 83 9   | 107 48 |
| 29      | 131 35 |        |        |        |        |        |        |
| May 1   |        | 155 18 | 179 33 | 204 47 | 231 9  | 258 26 | 286 20 |
| 13      | 314 33 | 342 53 | 11 5   | 38 47  | 65 33  | 91 8   | 115 38 |
| 27      | 139 28 | 163 13 | 187 31 |        |        |        |        |
| June 1  |        |        |        |        |        |        | 200 4  |
| 8       | 226 10 | 253 37 | 282 6  | 310 59 | 339 42 | 7 50   | 35 10  |
| 17      | 61 36  | 87 6   | 111 44 | 135 41 | 159 22 | 183 18 | 208 5  |
| July 1  | 234 13 | 261 59 | 291 5  | 320 49 | 350 11 | 18 28  | 45 28  |
| 15      | 71 16  | 96 9   | 120 21 | 144 9  | 167 49 | 191 45 | 216 26 |
| 29      | 242 25 | 270 7  |        |        |        |        |        |
| Aug. 1  |        |        |        |        |        | 234 37 | 314 33 |
| 5       | 344 55 | 14 22  | 42 11  | 68 20  | 93 14  | 117 21 | 141 6  |
| 19      | 164 47 | 188 38 | 212 56 | 238 8  | 264 41 | 292 59 | 323 53 |
| Sep. 1  |        |        |        | 338 10 | 8 34   | 37 38  | 64 46  |
| 9       | 90 10  | 114 26 | 138 9  | 161 50 | 185 44 | 210 2  | 234 57 |
| 23      | 260 46 | 287 54 | 316 35 | 346 34 |        |        |        |
| Oct. 1  |        |        |        |        | 16 47  | 45 57  | 73 17  |
| 7       | 98 48  | 123 4  | 146 47 | 170 31 | 194 40 | 219 24 | 244 49 |
| 21      | 270 59 | 298 6  | 328 22 | 355 36 | 25 8   | 53 55  |        |
| Nov. 1  |        |        | 67 47  | 94 12  | 119 8  | 143 7  | 166 50 |
| 11      | 190 52 | 215 38 | 241 18 | 267 48 | 295 2  | 322 54 | 351 18 |
| 25      | 19 56  | 48 17  | 75 45  |        |        |        |        |
| Dec. 1  |        |        |        | 101 57 | 126 53 | 150 56 | 174 41 |
| 9       | 198 46 | 223 43 | 249 51 | 277 10 | 305 19 | 333 51 | 23 18  |
| 23      | 30 19  | 57 43  | 84 19  | 109 58 | 134 43 |        |        |

Ayanamsa: 21° 15' 6"

## Longitudes of Planets

| 1918  | Sun       | Mars    | Mer.    | Mer.    | Jupit.  | Venus  | Saturn  | Rahu   |
|-------|-----------|---------|---------|---------|---------|--------|---------|--------|
| Jan.  | 5 284 22  | 178 26  | 279 24R | 274 33  | 61 13R  | 324 23 | 133 6R  | 290 11 |
|       | 10 294 33 | 180 33  | 273 34D | 275 48  | 61 41   | 328 3R | 132 24  | 270 26 |
|       | 25 304 44 | 182 13  | 280 4   | 285 15  | 61 28D  | 327 57 | 131 37  | 289 44 |
| Feb.  | 4 314 53  | 183 1R  | 291 53  | 298 44  | 61 36   | 323 53 | 130 44  | 289 12 |
|       | 14 325 00 | 182 21  | 306 2   | 313 44  | 62 4    | 317 51 | 130 00  | 288 41 |
|       | 24 335 11 | 180 21  | 321 49  | 330 19  | 62 51   | 313 30 | 129 15  | 268 11 |
| March | 6 345 7   | 177 13  | 332 15  | 348 37  | 63 55   | 313 2D | 128 38  | 267 37 |
|       | 10 355 6  | 173 24  | 338 24  | 354 8   | 64 13   | 316 13 | 128 8   | 267 5  |
|       | 26 5 1    | 169 36  | 18 9    | 26 54   | 66 45   | 322 3  | 127 47  | 266 23 |
| April | 5 14 53   | 168 39  | 33 51   | 35 28   | 68 28   | 329 43 | 127 38D | 266 5  |
|       | 15 24 42  | 164 51  | 40 21R  | 39 41R  | 70 21   | 331 10 | 127 23  | 265 30 |
|       | 23 34 23  | 163 51  | 37 8    | 33 52   | 72 21   | 348 17 | 127 51  | 264 58 |
| May   | 5 44 10   | 164 25D | 31 18   | 30 23   | 74 27   | 358 31 | 128 13  | 264 27 |
|       | 15 53 53  | 166 5   | 31 23D  | 34 10   | 76 38   | 9 15   | 128 45  | 263 55 |
|       | 25 63 27  | 163 39  | 38 30   | 41 11   | 78 53   | 20 14  | 129 28  | 263 23 |
| June  | 4 73 2    | 171 33  | 51 3    | 59 1    | 81 10   | 31 27  | 130 16  | 263 57 |
|       | 14 82 36  | 175 54  | 68 8    | 78 12   | 83 23   | 42 50  | 131 12  | 261 19 |
|       | 24 92 1   | 180 20  | 88 56   | 99 51   | 85 46   | 54 11  | 132 14  | 261 48 |
| July  | 4 101 41  | 185 11  | 110 24  | 120 17  | 88 3    | 66 2   | 163 22  | 261 16 |
|       | 14 111 13 | 190 23  | 129 23  | 137 41  | 90 17   | 77 49  | 134 33  | 260 43 |
|       | 24 120 46 | 195 55  | 145 11  | 151 50  | 92 28   | 89 41  | 135 47  | 260 12 |
| Aug.  | 4 130 19  | 201 42  | 157 34  | 162 11  | 94 34   | 101 38 | 137 3   | 259 40 |
|       | 13 139 55 | 207 44  | 165 21  | 165 52R | 96 35   | 113 42 | 138 20  | 259 9  |
|       | 23 149 32 | 213 59  | 166 41  | 162 31  | 98 27   | 125 50 | 139 36  | 258 37 |
| Sep.  | 4 159 12  | 221 26  | 158 22  | 154 25D | 100 11  | 138 3  | 140 52  | 258 6  |
|       | 12 168 24 | 227 4   | 153 19  | 155 57  | 101 44  | 150 21 | 142 5   | 257 27 |
|       | 22 178 40 | 233 11  | 161 49  | 169 41  | 103 5   | 162 43 | 143 14  | 257 2  |
| Oct.  | 2 188 29  | 240 50  | 178 27  | 187 23  | 104 12  | 175 1  | 144 19  | 256 30 |
|       | 12 198 21 | 247 57  | 196 10  | 204 42  | 105 2   | 187 36 | 145 18  | 255 58 |
|       | 22 208 17 | 255 12  | 212 57  | 220 53  | 105 35  | 200 6  | 146 11  | 255 35 |
| Nov.  | 1 218 16  | 262 34  | 228 46  | 236 23  | 105 49  | 212 33 | 146 55  | 254 55 |
|       | 11 228 18 | 270 4   | 243 50  | 251 4   | 105 43  | 225 12 | 147 31  | 254 11 |
|       | 21 238 22 | 277 39  | 258 00  | 264 35  | 105 18R | 237 46 | 147 56  | 253 51 |
| Dec.  | 1 248 29  | 285 20  | 269 50  | 273 18D | 104 33  | 250 20 | 148 11  | 253 20 |
|       | 11 258 11 | 293 5   | 273 19R | 288 50  | 103 33  | 262 53 | 148 15R | 252 58 |
|       | 21 268 49 | 300 11  | 282 9   | 298 00  | 102 20  | 275 29 | 148 8   | 252 16 |
|       | 31 279 1  | 308 44  | 298 1   | -       | 101 00  | 288 3  | 147 49  | 251 44 |

1918 A.D.

## RAMAN'S EPHEMERIS

57

## Longitude of the Moon

|       | 1918 | Sun.   | Tues.  | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|-------|------|--------|--------|--------|--------|--------|--------|--------|
| Jan.  | 1    |        | 146 48 | 170 38 | 194 26 | 218 49 | 244 23 | 271 29 |
|       | 13   | 300 3  | 329 27 | 358 45 | 27 13  | 54 31  | 81 43  | 106 9  |
|       | 27   | 130 51 | 155 00 | 178 48 |        |        |        |        |
| Feb.  | 1    |        |        |        |        |        |        | 190 39 |
|       | 3    | 214 36 | 239 20 | 265 30 | 293 28 | 323 6  | 353 24 | 23 5   |
|       | 17   | 51 16  | 77 50  | 103 8  | 127 40 | 151 43 | 175 32 |        |
| March | 1    |        |        |        |        |        |        | 199 17 |
|       | 3    | 223 16 | 247 55 | 273 50 | 301 33 | 331 8  | 1 45   | 31 58  |
|       | 17   | 60 36  | 87 20  | 112 32 | 136 48 | 160 39 | 184 24 | 211 16 |
|       | 31   | 237 27 |        |        |        |        |        |        |
| April | 1    |        |        |        |        | 244 44 | 270 00 | 296 36 |
|       | 7    | 324 53 | 354 44 | 25 10  | 54 50  | 82 47  | 108 53 | 133 36 |
|       | 21   | 157 33 | 181 17 | 205 10 | 229 27 | 254 19 |        |        |
| May   | 1    |        |        |        |        |        | 279 58 | 306 41 |
|       | 5    | 334 41 | 3 54   | 33 40  | 62 56  | 90 50  | 117 5  | 141 56 |
|       | 19   | 165 56 | 189 42 | 213 43 | 238 21 | 263 48 | 290 7  | 317 18 |
| June  | 1    |        |        |        | 331 14 | 359 38 | 28 30  | 57 16  |
|       | 9    | 85 18  | 112 7  | 137 36 | 162 1  | 185 52 | 209 45 | 234 13 |
|       | 23   | 259 41 | 286 17 | 313 54 | 342 9  |        |        |        |
| July  | 1    |        |        |        |        | 10 38  | 38 59  | 66 53  |
|       | 7    | 94 5   | 120 21 | 145 11 | 169 57 | 193 47 | 217 39 | 242 11 |
|       | 21   | 267 55 | 295 11 | 323 38 | 352 44 | 21 38  | 49 47  |        |
| Aug.  | 1    |        |        | 63 32  | 90 21  | 116 22 | 141 36 | 166 7  |
|       | 11   | 190 2  | 213 44 | 237 46 | 262 48 | 289 26 | 317 51 | 347 11 |
|       | 25   | 17 25  | 46 24  | 74 2   | 100 24 |        |        |        |
| Sep.  | 1    | 113 12 | 138 15 | 162 42 | 186 39 | 210 20 | 234 4  | 258 25 |
|       | 15   | 284 1  | 311 33 | 340 56 | 11 23  | 41 32  | 70 16  | 97 18  |
|       | 29   | 122 5  |        |        |        |        |        |        |
| Oct.  | 1    |        | 147 35 | 171 41 | 195 28 | 219 8  | 242 57 | 267 21 |
|       | 13   | 221 52 | 320 5  | 349 10 | 19 11  | 49 59  | 79 9   | 106 29 |
|       | 27   | 132 11 | 156 43 | 180 37 |        |        |        |        |
| Nov.  | 1    |        |        |        |        |        |        | 102 28 |
|       | 11   | 216 10 | 242 4  | 268 25 | 289 32 | 315 48 | 343 11 | 12 50  |
|       | 17   | 42 55  | 72 43  | 101 13 | 127 58 | 153 10 | 177 19 | 201 1  |
| Dec.  | 1    | 224 6  | 248 58 | 273 20 | 299 32 | 326 9  | 353 47 | 22 11  |
|       | 15   | 51 34  | 80 42  | 108 57 | 135 48 | 161 10 | 185 24 | 209 11 |
|       | 29   | 232 55 | 257 11 |        |        |        |        |        |

Ayanamsha: 21° 15' 56"

## Longitudes of Planets

|       | 1919 | Sun    | Mars.  | Merc.   | Merc.   | Jupit.  | Venus   | Saturn  | Rahu   |
|-------|------|--------|--------|---------|---------|---------|---------|---------|--------|
| Jan.  | 5    | 284 7  | 312 41 | 261 11  | 266 10  | 100 19R | 294 20  | 147 36R | 251 28 |
|       | 15   | 291 11 | 320 34 | 272 12  | 278 11  | 99 1    | 306 53  | 147 4   | 250 56 |
|       | 25   | 304 29 | 328 27 | 283 55  | 293 22  | 97 50   | 319 25  | 146 24  | 250 25 |
| Feb.  | ■    | 314 58 | 335 22 | 301 6   | 309 ■   | 96 52   | 331 56  | 145 53  | 249 53 |
|       | 14   | 324 45 | 344 12 | 317 31  | 326 15  | 96 11   | 344 24  | 144 50  | 240 21 |
|       | 24   | 334 50 | 352 1  | 331 22  | —       | 95 49   | 356 49  | 144 2   | 248 49 |
| March | 6    | 344 52 | 359 47 | 354 24  | ■ 46    | 95 47D  | 9 12    | 143 16  | 248 17 |
|       | 16   | 354 51 | 7 30   | 12 3    | ■ 17    | ■ 4     | 21 30   | 142 36  | 247 46 |
|       | 26   | 4 47   | 15 ■   | 21 40R  | 21 55R  | 96 40   | 33 43   | 142 3   | 247 14 |
| April | 5    | 14 39  | 22 44  | 19 23   | 15 42   | 97 33   | 45 50   | 141 39  | 246 42 |
|       | 15   | 24 28  | 30 11  | 12 22   | 10 44D  | ■ 41    | 57 52   | 141 25  | 246 10 |
|       | 25   | 34 13  | 37 38  | 11 16D  | 13 43   | 100 3   | 69 46   | 141 21D | 245 39 |
| May   | ■    | 43 56  | 44 58  | 17 31   | 22 47   | 101 37  | 81 32   | 141 28  | 245 7  |
|       | 15   | 53 50  | 52 13  | 29 10   | 36 11   | 103 21  | 93 8    | 141 46  | 244 35 |
|       | 25   | 63 13  | 59 ■   | 44 52   | 54 7    | 105 12  | 104 32  | 142 14  | 244 3  |
| June  | ■    | 72 49  | 66 24  | 64 14   | 75 00   | 107 11  | 115 41  | 142 50  | 243 32 |
|       | 14   | 82 27  | 73 26  | 85 59   | ■ 38    | 109 16  | 126 32  | 143 36  | 243 00 |
|       | 24   | 91 55  | 80 20  | 106 35  | 115 40  | 111 24  | 136 59  | 144 28  | 242 28 |
| July  | 4    | 101 27 | 87 9   | 123 51  | 131 ■   | 113 35  | 146 55  | 145 27  | 241 56 |
|       | 14   | 110 59 | 93 54  | 137 21  | 142 31  | 115 49  | 156 7   | 146 32  | 241 25 |
|       | 24   | 120 32 | 100 34 | 146 21  | 148 35R | 118 2   | 164 18  | 147 41  | 240 53 |
| Aug.  | 3    | 130 6  | 107 10 | 148 51R | 146 59  | 120 16  | 171 3   | 148 53  | 240 21 |
|       | 13   | 139 41 | 113 42 | 143 22  | 139 20  | 122 27  | 175 39  | 150 7   | 239 49 |
|       | 23   | 150 16 | 120 10 | 136 48D | 137 11D | 124 36  | 177 14R | 151 23  | 239 18 |
| Sep.  | ■    | 158 51 | 126 33 | 140 52  | 147 33  | 126 41  | 175 3   | 152 39  | 238 46 |
|       | 12   | 168 40 | 132 53 | 155 46  | 165 00  | 128 40  | 169 39  | 153 55  | 238 14 |
|       | 22   | 178 26 | 139 8  | 174 20  | 183 27  | 130 32  | 163 58  | 155 ■   | 237 42 |
| Oct.  | ■    | 188 14 | 145 19 | 192 14  | 200 39  | 132 16  | 161 12D | 156 19  | 237 11 |
|       | 12   | 198 6  | 157 26 | 208 44  | 216 32  | 133 50  | 162 20  | 157 25  | 236 39 |
|       | 22   | 208 2  | 157 28 | 224 3   | 231 91  | 135 12  | 166 46  | 158 26  | 236 7  |
| Nov.  | 1    | 218 1  | 163 24 | 238 16  | 244 48  | 136 21  | 173 32  | 159 20  | 235 35 |
|       | 11   | 228 ■  | 169 14 | 250 39  | 255 20  | 137 14  | 181 56  | 160 7   | 235 3  |
|       | 21   | 238 8  | 174 58 | 257 53R | 256 55R | 137 50  | 191 27  | 160 46  | 234 31 |
| Dec.  | 1    | 248 15 | 180 33 | 251 45  | 245 13  | 128 7R  | 201 45  | 161 15  | 234 00 |
|       | 11   | 258 24 | 185 59 | 241 53  | 242 54D | 138 5   | 212 36  | 161 33  | 233 28 |
|       | 21   | 268 ■  | 191 14 | 246 54D | 252 32  | 137 43  | 223 53  | 161 41R | 232 56 |
|       | 31   | 278 46 | 196 16 | 259 ■   | —       | 137 3   | 235 27  | 161 37  | 232 25 |



# RAMAN'S EPHEMERIS Longitude of the Moon

| 1919    | Sun    | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  |        |        |        |        |        | 269 59 | 295 59 |
| ■       | 322 57 | 350 39 | 18 47  | 47 7   | 75 25  | 103 21 | 130 27 |
| 19      | 156 24 | 181 9  | 205 ■  | 228 45 | 252 52 | 278 ■  | 304 41 |
| Feb. 1  |        |        |        | 318 30 | 346 50 | 15 31  | 43 56  |
| 9       | 71 50  | 99 11  | 125 54 | 151 51 | 176 ■■ | 201 3  | 224 44 |
| 23      | 248 30 | 273 4  | 299 6  |        |        |        |        |
| March 1 |        |        |        | 326 52 | 356 1  | 25 34  | 54 34  |
| 9       | 82 32  | 109 26 | 135 28 | 160 45 | 185 20 | 209 18 | 232 55 |
| 23      | 256 39 | 281 9  | 307 6  | 334 54 | 4 24   |        |        |
| April 1 |        | 19 30  | 49 35  | 78 40  | 106 7  | 132 32 | 157 43 |
| 13      | 182 ■  | 206 6  | 229 44 | 253 24 | 297 30 | 302 36 | 329 16 |
| 27      | 357 45 | 27 43  |        |        |        |        |        |
| May 1   |        |        | 58 7   | 87 42  | 115 42 | 142 3  | 167 4  |
| 11      | 191 14 | 214 57 | 238 34 | 262 24 | 286 46 | 312 2  | 338 36 |
| 25      | 6 42   | 36 12  | 66 21  | ■ 3    |        |        |        |
| June 1  | 110 24 | 137 50 | 163 35 | 188 ■  | 211 50 | 235 27 | 259 20 |
| 15      | 283 48 | 309 8  | 335 15 | 2 32   | 30 55  | 60 11  | 89 43  |
| 29      | 118 ■■ |        |        |        |        |        |        |
| July 1  |        | 146 ■  | 171 55 | 196 28 | 220 11 | 243 51 | 267 59 |
| 13      | 292 57 | 318 52 | 345 41 | 13 13  | 41 22  | 69 59  | ■ 48   |
| 27      | 126 59 | 154 10 | 179 57 |        |        |        |        |
| Aug. 1  |        |        |        |        |        |        | 192 20 |
| 3       | 216 23 | 240 1  | 263 57 | 288 47 | 314 50 | ■ 1    | ■ 55   |
| 17      | 38 12  | 66 26  | 94 32  | 122 18 | 149 22 | 175 25 | 200 18 |
| 31      | 224 16 |        |        |        |        |        |        |
| Sep. 1  |        |        |        |        | 236 ■  | 259 47 | 284 11 |
| 7       | 309 52 | 337 5  | 5 31   | ■ 11   | 63 18  | 91 22  | 118 48 |
| 21      | 145 30 | 171 22 | 196 20 | 220 ■■ | 244 7  |        |        |
| Oct. 1  |        |        |        |        |        | 267 ■■ | 292 7  |
| 5       | 317 48 | 345 13 | 14 12  | 43 57  | 73 26  | 101 56 | 129 13 |
| 19      | 155 23 | 180 36 | ■ 3    | 228 56 | 252 30 | 276 19 | 300 27 |
| Nov. 1  |        |        |        | 313 1  | 339 21 | 7 30   | 37 12  |
| 9       | 67 ■■  | 97 18  | 125 ■■ | 153 20 | 177 40 | 202 2  | 225 ■■ |
| 23      | 249 26 | 273 5  | ■ 8    | ■ 59   |        |        |        |
| Dec. 1  |        |        |        |        | 348 4  | 15 47  | 45 8   |
| 7       | 75 29  | 106 41 | 134 31 | 161 31 | 49     | 210 59 | 234 37 |
| 21      | 258 12 | 282 5  | 306 ■■ | ■ 11   | 43     | 25 6   |        |

Ayanan: 21° 16' 47

## Longitudes of Planets

| 1920  | Sun       | Mars    | Mer.    | Mer.    | Jupit.  | Venus  | Saturn  | Rahu   |
|-------|-----------|---------|---------|---------|---------|--------|---------|--------|
| Jan.  | 5 283 52  | 198 41  | 220 2   | 273 20  | 136 30R | 241 19 | 161 31R | 232 9  |
|       | 15 294 2  | 208 17  | 280 52  | 288 38  | 135 32  | 253 11 | 161 12  | 231 37 |
|       | 25 304 11 | 207 30  | 296 37  | 304 52  | 134 18  | 265 11 | 160 42  | 231 5  |
| Feb.  | 4 314 23  | 211 16  | 313 24  | 322 14  | 132 59  | 277 17 | 160 5   | 230 33 |
|       | 14 324 31 | 214 28  | 331 20  | 340 32  | 131 40  | 289 26 | 159 22  | 230 2  |
|       | 24 334 36 | 216 57  | 349 25  | 357 8   | 130 28  | 301 39 | 158 35  | 229 30 |
| March | 5 344 38  | 218 33  | 2 34    | 1 41R   | 129 55  | 313 53 | 157 47  | 228 58 |
|       | 15 354 37 | 219 6R  | 3 13R   | 359 16  | 128 42  | 326 9  | 157 00  | 228 26 |
|       | 25 4 33   | 218 25  | 354 58  | 352 13  | 128 15  | 338 25 | 156 18  | 227 54 |
| April | 4 14 25   | 216 24  | 351 46D | 353 59  | 128 6D  | 350 42 | 155 43R | 227 55 |
|       | 14 24 14  | 213 26  | 356 59  | 1 50    | 128 16  | 2 58   | 155 15  | 226 51 |
|       | 24 34 00  | 209 45  | 9 5     | 14 40   | 128 45  | 15 15  | 154 57  | 226 19 |
| May   | 4 43 42   | 206 9   | 22 23   | 30 54   | 129 30  | 27 31  | 154 49D | 225 47 |
|       | 14 53 22  | 203 17  | 40 14   | 50 20   | 130 31  | 39 47  | 154 52  | 225 16 |
|       | 24 63 59  | 201 37  | 61 4    | 72 2    | 131 46  | 52 5   | 155 5   | 224 44 |
| June  | 5 72 34   | 201 17D | 82 43   | 83 39   | 133 12  | 64 18  | 155 28  | 224 13 |
|       | 13 82 8   | 202 14  | 101 38  | 109 34  | 134 49  | 76 34  | 156 1   | 223 40 |
|       | 23 91 41  | 204 18  | 116 25  | 122 5   | 136 35  | 88 50  | 156 42  | 223 19 |
| July  | 3 101 13  | 207 19  | 126 28  | 129 18  | 138 28  | 101 5  | 157 31  | 222 55 |
|       | 13 110 45 | 211 7   | 130 18R | 129 21R | 140 27  | 113 25 | 158 27  | 222 5  |
|       | 23 120 18 | 215 33  | 126 38  | 123 5   | 142 31  | 125 44 | 159 28  | 221 33 |
| Aug.  | 2 129 51  | 220 31  | 120 10D | 119 17D | 144 38  | 138 4  | 160 34  | 221 2  |
|       | 12 139 23 | 225 57  | 121 9   | 125 50  | 146 48  | 150 24 | 161 45  | 220 29 |
|       | 22 149 4  | 231 45  | 132 53  | 141 43  | 148 59  | 162 44 | 162 58  | 219 58 |
| Sep.  | 1 158 43  | 237 53  | 151 26  | 161 10  | 151 9   | 175 5  | 164 12  | 219 26 |
|       | 11 168 26 | 244 13  | 170 37  | 179 36  | 153 19  | 187 25 | 165 28  | 218 55 |
|       | 21 178 11 | 250 58  | 188 13  | 196 23  | 155 26  | 199 45 | 166 43  | 218 22 |
| Oct.  | 1 188 00  | 257 51  | 204 11  | 211 38  | 157 29  | 212 5  | 167 56  | 217 51 |
|       | 11 197 52 | 264 55  | 218 19  | 225 21  | 159 27  | 224 23 | 169 7   | 217 19 |
|       | 21 207 11 | 272 5   | 231 28  | 244 43R | 151 19  | 236 41 | 170 14  | 216 47 |
|       | 31 217 46 | 279 31  | 240 37R | —       | 153 5   | 248 57 | 171 16  | 216 15 |
| Nov.  | 10 227 48 | 287 1   | 240 16  | 234 37  | 164 36  | 261 11 | 172 13  | 215 44 |
|       | 20 237 53 | 294 36  | 228 29  | 226 5   | 165 57  | 273 23 | 173 5   | 215 12 |
|       | 30 248 00 | 302 5   | 228 5   | —       | 167 5   | 285 32 | 173 43  | 214 40 |
| Dec.  | 10 258 9  | 309 58  | 239 5   | 249 5   | 167 59  | 297 37 | 174 14  | 214 5  |
|       | 20 268 20 | 317 5   | 253 21  | 260 51  | 168 31  | 309 36 | 174 36  | 213 37 |
|       | 30 278 11 | 325 29  | 268 30  | —       | 168 53  | 321 25 | 174 47  | 213 5  |

Ayanamisa : 21° 17' 37"

1920 A.D.

# RAMAN'S EPHEMERIS Longitude of the Moon

61

| 1920    | Sun.   | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  |        |        | 39 13  | 68 32  | 98 34  | 128 14 | 156 26 |
| 11      | 182 46 | 207 31 | 231 18 | 254 52 | 278 44 | 303 17 | 328 37 |
| 25      | 354 43 | 21 35  | 49 19  | 77 56  |        |        |        |
| Feb. 1  | 92 30  | 121 46 | 150 24 | 177 28 | 203 12 | 227 29 | 251 8  |
| 15      | 274 52 | 299 18 | 324 45 | 351 13 | 18 26  | 46 10  | 74 16  |
| 29      | 102 37 |        |        |        |        |        |        |
| March 1 |        |        |        |        | 116 49 | 144 59 | 172 19 |
| 7       | 198 24 | 223 12 | 247 7  | 270 47 | 294 53 | 320 1  | 346 28 |
| 21      | 14 7   | 42 29  | 71 2   | 99 23  | 127 19 | 154 37 |        |
| April 1 |        |        | 167 58 | 193 58 | 218 58 | 243 8  | 268 50 |
| 11      | 290 39 | 315 12 | 341 2  | 8 27   | 37 12  | 66 36  | 95 48  |
| 25      | 124 11 | 151 28 | 177 42 |        |        |        |        |
| May 1   |        |        |        | 202 58 | 227 20 | 251 25 | 275 6  |
| 9       | 298 55 | 323 25 | 349 9  | 16 31  | 45 32  | 75 34  | 105 30 |
| 23      | 134 21 | 161 39 | 187 30 | 212 16 | 236 21 |        |        |
| June 1  |        | 248 15 | 271 56 | 295 42 | 319 52 | 344 52 | 11 11  |
| 13      | 39 11  | 68 48  | 99 15  | 129 13 | 157 40 | 184 16 | 209 20 |
| 27      | 233 26 | 257 8  |        |        |        |        |        |
| July 1  |        |        | 280 49 | 304 46 | 329 10 | 354 18 | 20 31  |
| 11      | 48 12  | 77 26  | 107 40 | 137 43 | 166 22 | 193 6  | 218 11 |
| 25      | 242 13 | 265 52 | 289 40 | 313 53 |        |        |        |
| Aug. 1  | 326 13 | 351 22 | 17 17  | 44 12  | 72 19  | 101 35 | 131 21 |
| 15      | 160 31 | 188 11 | 214 6  | 238 37 | 262 25 | 286 10 | 310 22 |
| 29      | 335 18 | 1 4    |        |        |        |        |        |
| Sep. 1  |        |        |        |        | 14 13  |        | 14 6   |
| 5       | 68 44  | 97 7   | 126 1  | 154 49 | 182 45 | 209 18 | 234 25 |
| 19      | 258 33 | 282 17 | 306 17 | 331 4  | 356 55 | 23 49  |        |
| Oct. 1  |        |        |        |        |        |        | 51 30  |
| 3       | 79 41  | 108 3  | 136 20 | 164 13 | 191 19 | 217 21 | 242 18 |
| 17      | 266 23 | 290 8  | 314 7  | 338 57 | 5 4    | 32 36  | 61 13  |
| 31      | 90 15  |        |        |        |        |        |        |
| Nov. 1  |        |        |        |        | 104 43 | 133 10 | 160 47 |
| 7       | 187 29 | 213 16 | 238 14 | 262 30 | 286 18 | 310 3  | 334 16 |
| 21      | 359 35 | 26 29  | 55 ■   | 84 52  | 114 45 |        |        |
| Dec. 1  |        |        |        |        |        | 143 42 | 171 14 |
| 5       | 197 24 | 222 33 | 247 00 | 271 00 | 294 45 | 318 29 | 342 37 |
| 19      | 7 43   | 34 22  | 62 54  | 93 ■   | 123 37 | 153 14 | 181 4  |

Ayanamsa: 21° 17' 37"

## Longitudes of Planets

|       | 1921 | Sun    | Mars   | Merc.   | Merc.   | Jupit.  | Venus  | Saturn  | Rahu   |
|-------|------|--------|--------|---------|---------|---------|--------|---------|--------|
| Jan.  | 5    | 284 30 | 330 ■  | 277 52  | 285 50  | 168 55R | 328 26 | 174 48R | 212 46 |
|       | 11   | 294 50 | 337 55 | 294 00  | 362 23  | 168 42  | 339 55 | 174 41  | 212 14 |
|       | 25   | 305 9  | 345 38 | 310 58  | 319 43  | 168 10  | 351 5  | 174 24  | 211 42 |
| Feb.  | ■    | 315 9  | 353 20 | 328 26  | 336 38  | 167 21  | 1 49   | 173 57  | 211 10 |
|       | 14   | 325 17 | 0 59   | 343 21  | 347 15  | 166 18  | 11 57  | 173 22  | 210 39 |
|       | 24   | 335 ■  | 8 34   | 347 14R | —       | 165 5   | 21 15  | 172 40  | 210 7  |
| March | 6    | 345 23 | 16 ■   | 338 21  | 334 43  | 163 47  | 29 21  | 171 54  | 209 35 |
|       | ■    | 355 22 | 23 ■   | 333 28D | 334 42D | 162 30  | 35 44  | 171 7   | 209 3  |
|       | 26   | 5 17   | 30 55  | 337 52  | 342 29  | 161 19  | 39 35  | 170 20  | 208 32 |
| April | 5    | 15 9   | ■ 12   | 348 12  | 354 48  | 160 26  | 39 57R | 169 37  | 208 00 |
|       | 15   | 24 ■   | 45 25  | ■ 9     | 10 13   | 159 34  | 36 22  | 169 00  | 207 28 |
|       | 25   | 34 44  | 52 33  | 18 59   | 28 27   | 159 6   | 30 18  | 168 31  | 206 56 |
| May   | ■    | 44 26  | 59 36  | 38 36   | 49 18   | 158 56  | 25 19  | 168 10  | 206 24 |
|       | 15   | ■ 6    | 66 35  | 60 11   | 70 42   | 159 4D  | 23 55D | 168 00  | 205 52 |
|       | 25   | 63 43  | 73 29  | 80 21   | 88 53   | 159 30  | 26 14  | 167 59D | 205 21 |
| June  | 4    | 73 18  | 80 19  | 96 11   | 102 11  | 160 12  | 31 24  | 168 9   | 204 49 |
|       | 14   | ■ 52   | 87 ■   | 106 45  | 109 42  | 161 10  | 38 31  | 168 29  | 204 18 |
|       | 24   | ■ 24   | 93 47  | 110 50R | 110 6   | 162 22  | 46 58  | 168 59  | 203 45 |
| July  | 4    | 101 56 | 100 25 | 107 46  | 104 41R | 163 45  | 56 19  | 169 37  | 203 14 |
|       | 11   | 111 28 | 107 1  | 102 6D  | 101 9D  | 165 19  | 66 19  | 170 23  | 202 42 |
|       | 24   | 120 ■  | 113 33 | 102 28  | 106 13  | 167 2   | 76 49  | 171 16  | 202 10 |
| Aug.  | 3    | 130 ■  | 120 2  | 112 17  | 120 20  | 168 53  | 87 40  | 172 15  | 201 38 |
|       | 13   | 140 10 | 126 29 | 129 46  | 139 49  | 170 50  | 98 50  | 173 20  | 201 7  |
|       | 23   | 149 47 | 132 53 | 149 52  | 159 31  | 172 52  | 110 14 | 174 28  | 200 35 |
| Sep.  | 2    | 159 27 | 139 16 | 168 41  | 177 20  | 174 58  | 121 50 | 175 40  | 200 3  |
|       | 12   | 160 10 | 145 36 | 185 30  | 193 12  | 177 6   | 133 38 | 176 53  | 199 31 |
|       | 22   | 178 56 | 151 54 | 200 27  | 207 14  | 179 15  | 145 35 | 178 8   | 198 59 |
| Oct.  | 2    | 188 45 | 158 11 | 213 27  | 218 55  | 181 25  | 157 41 | 179 22  | 198 28 |
|       | 12   | 198 37 | 164 26 | 223 17  | 225 55R | 183 34  | 159 53 | 180 35  | 197 56 |
|       | ■    | 208 33 | 170 38 | 225 52R | 222 17  | 185 40  | 182 12 | 181 46  | 197 24 |
| Nov.  | 1    | 218 32 | 176 49 | 216 7   | 211 51D | 187 42  | 194 34 | 182 53  | 196 53 |
|       | 11   | 228 34 | 182 58 | 210 47D | 214 18  | 189 40  | 207 2  | 183 56  | 196 21 |
|       | 21   | 238 39 | 189 4  | 220 4   | 217 10  | 191 30  | 219 32 | 184 53  | 195 49 |
| Dec.  | 1    | 248 46 | 195 8  | 234 38  | 242 17  | 193 12  | 232 ■  | 185 43  | 195 17 |
|       | 11   | 258 56 | 201 ■  | 250 1   | 257 48  | 194 44  | 244 38 | 186 25  | 194 45 |
|       | 21   | 269 6  | 207 4  | 265 37  | 273 32  | 196 5   | 257 12 | 186 58  | 194 13 |
|       | 31   | 278 18 | 212 56 | 281 33  | —       | 197 11  | 269 46 | 187 21  | 193 42 |

Ayanamsa: 21° 18' 27"

1921 A.D.

## RAMAN'S EPHEMERIS

83

## Longitude of the Moon

| 1921    | Sun.   | Tue.   | Thurs. | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  |        |        |        | 194 17 | 219 39 | 242 5  | 267 56 |
| 9       | 291 41 | 315 27 | 339 28 | 4 1    | 29 38  | 56 50  | 85 53  |
| 23      | 116 19 | 146 50 | 176 2  | 203 16 | 228 44 |        |        |
| Feb. 1  |        | 240 59 | 264 56 | 222 28 | 312 26 | 336 32 | 1 7    |
| 13      | 26 22  | 52 41  | 79 21  | 109 39 | 139 45 | 169 18 | 197 55 |
| 27      | 224 47 |        |        |        |        |        |        |
| March 1 |        | 249 25 | 273 26 | 297 11 | 321 3  | 345 28 | 10 33  |
| 13      | 36 24  | 63 7   | 90 49  | 119 11 | 148 42 | 177 43 | 205 43 |
| 27      | 232 15 | 257 21 | 281 30 |        |        |        |        |
| April 1 |        |        |        |        |        |        | 293 23 |
| 3       | 317 12 | 341 29 | 6 38   | 32 46  | 59 51  | 87 40  | 115 58 |
| 17      | 144 27 | 172 46 | 200 28 | 227 12 | 252 47 | 277 21 | 301 16 |
| May 1   | 325 6  | 349 27 | 14 50  | 41 34  | 69 31  | 93 13  | 127 00 |
| 15      | 155 21 | 182 58 | 209 48 | 235 49 | 260 59 | 285 23 | 309 16 |
| 29      | 333 4  | 357 22 |        |        |        |        |        |
| June 1  |        |        |        |        |        | 9 55   | 36 7   |
| 11      | 64 00  | 93 13  | 122 53 | 151 58 | 179 54 | 206 38 | 232 23 |
| 19      | 257 24 | 281 48 | 305 45 | 329 28 | 353 23 | 18 11  |        |
| July 1  |        |        |        |        |        |        | 44 15  |
| 3       | 72 16  | 101 57 | 132 11 | 161 56 | 190 5  | 216 40 | 242 2  |
| 17      | 266 36 | 290 41 | 314 30 | 338 13 | 2 10   | 26 51  | 52 52  |
| 31      | 50 43  |        |        |        |        |        |        |
| Aug. 1  |        |        |        |        | 95 21  | 125 37 | 156 6  |
| 7       | 185 28 | 213 2  | 238 57 | 263 41 | 287 45 | 311 32 | 335 17 |
| 21      | 359 15 | 23 42  | 49 4   | 75 49  | 104 15 | 134 7  |        |
| Sep. 1  |        |        | 149 18 | 179 20 | 208 2  | 234 57 | 260 18 |
| 11      | 284 36 | 308 24 | 332 9  | 356 12 | 20 47  | 46 4   | 72 21  |
| 25      | 99 11  | 128 30 | 158 1  |        |        |        |        |
| Oct. 1  |        |        |        | 187 31 | 216 3  | 243 5  | 268 35 |
| 9       | 292 56 | 316 43 | 340 32 | 4 11   | 29 56  | 55 56  | 82 50  |
| 23      | 110 32 | 138 52 | 167 23 | 196 10 | 224 7  |        |        |
| Nov. 1  |        | 237 42 | 263 51 | 288 48 | 312 47 | 336 30 | 0 34   |
| 13      | 25 33  | 51 45  | 79 6   | 107 15 | 135 40 | 163 56 | 191 51 |
| 27      | 219 17 | 246 1  |        |        |        |        |        |
| Dec. 1  |        |        | 271 50 | 296 37 | 320 36 | 344 16 | 8 17   |
| 11      | 33 10  | 59 58  | 87 5   | 117 12 | 146 22 | 174 50 | 202 23 |
| 25      | 229 0  | 255 2  | 280 17 | 304 47 |        |        |        |

Ayanamsa: 21° 18' 27"

## Longitudes of Planets

| 1922  | Sun       | Mars    | Mer.    | Mer.    | Jupit.  | Venus   | Saturn  | Rahu   |
|-------|-----------|---------|---------|---------|---------|---------|---------|--------|
| Jan.  | 5 284 24  | 215 50  | 289 13  | 293 00  | 197 39  | 276 4   | 187 29  | 193 26 |
|       | 15 294 35 | 221 33  | 306 21  | 314 33  | 198 22  | 288 34  | 187 36R | 192 64 |
|       | 25 304 45 | 227 9   | 322 11  | 228 13  | 198 47  | 301 12  | 187 34  | 192 23 |
| Feb.  | 4 314 55  | 232 36  | 331 9   | 329 49R | 198 54R | 313 44  | 187 18  | 191 51 |
|       | 14 325 2  | 237 52  | 324 51R | 319 29  | 198 41  | 325 18  | 186 54  | 191 19 |
|       | 24 335 6  | 242 55  | 316 26D | —       | 198 10  | 338 49  | 186 22  | 190 47 |
| March | 6 345 9   | 247 41  | 318 38  | 322 40  | 197 23  | 351 19  | 185 42  | 190 15 |
|       | 16 355 7  | 252 8   | 327 55  | 334 5   | 196 21  | 3 46    | 184 34  | 189 43 |
|       | 26 365 5  | 256 8   | 340 59  | 348 32  | 195 10  | 10 12   | 184 11  | 189 12 |
| April | 5 14 55   | 259 10  | 334 42  | 5 28    | 193 53  | 28 35   | 183 25  | 188 40 |
|       | 15 24 44  | 262 23  | 14 51   | 14 52   | 192 37  | 40 55   | 182 41  | 188 8  |
|       | 25 34 29  | 264 19  | 35 23   | 41 7    | 191 27  | 53 12   | 182 2   | 187 37 |
| May   | 5 44 12   | 265 14R | 56 29   | 65 57   | 190 26  | 61 27   | 181 30  | 187 4  |
|       | 15 53 51  | 264 57  | 74 7    | 80 49   | 189 40  | 77 38   | 181 7   | 186 33 |
|       | 25 63 20  | 263 25  | 85 55   | 89 19   | 189 10  | 89 45   | 180 53  | 185 1  |
| June  | 4 73 4    | 260 49  | 90 49R  | 90 11R  | 188 58D | 101 49  | 180 49D | 185 34 |
|       | 14 82 37  | 252 37  | 82 27   | 85 40   | 187 4   | 113 49  | 180 55  | 184 58 |
|       | 24 92 10  | 254 30  | 83 14   | 82 8D   | 189 28  | 125 41  | 181 11  | 184 21 |
| July  | 4 101 42  | 252 12  | 82 58D  | 85 51   | 190 8   | 137 33  | 181 37  | 183 54 |
|       | 14 111 14 | 251 9D  | 90 46   | 97 34   | 191 4   | 149 10  | 182 11  | 183 22 |
|       | 24 120 47 | 251 29  | 106 3   | 115 47  | 192 13  | 160 50  | 182 54  | 182 50 |
| Aug.  | 3 130 21  | 253 9   | 124 9   | 136 29  | 193 35  | 172 15  | 183 44  | 182 15 |
|       | 13 139 56 | 255 57  | 146 26  | 155 48  | 195 1   | 183 28  | 184 41  | 181 47 |
|       | 23 149 33 | 259 43  | 164 36  | 172 49  | 196 50  | 194 25  | 185 11  | 181 15 |
| Sep.  | 2 159 13  | 264 15  | 180 29  | 187 36  | 197 40  | 205 3   | 186 49  | 180 44 |
|       | 12 168 55 | 269 26  | 194 1   | 199 33  | 200 37  | 215 14  | 187 59  | 180 12 |
|       | 22 178 41 | 275 7   | 204 53  | 208 29  | 202 11  | 224 50  | 189 11  | 179 40 |
| Oct.  | 2 188 30  | 281 12  | 210 10R | 209 4R  | 204 45  | 233 34  | 190 25  | 179 8  |
|       | 12 198 22 | 287 38  | 204 47  | 199 54  | 204 54  | 241 1   | 191 38  | 178 36 |
|       | 22 208 18 | 294 18  | 195 00D | 195 32D | 209 1   | 246 43R | 192 51  | 178 4  |
| Nov.  | 1 218 17  | 301 12  | 199 53  | 206 25  | 211 15  | 249 39R | 194 1   | 177 33 |
|       | 11 228 19 | 308 15  | 213 56  | 221 49  | 213 25  | 248 53  | 195 10  | 177 1  |
|       | 21 238 24 | 315 24  | 229 1   | 237 42  | 215 32  | 244 25  | 195 13  | 176 29 |
| Dec.  | 1 248 31  | 322 40  | 245 35  | 253 27  | 217 35  | 238 53  | 197 11  | 175 34 |
|       | 11 258 41 | 229 58  | 261 11  | 269 11  | 219 34  | 234 52D | 198 1   | 175 26 |
|       | 21 268 51 | 337 19  | 277 8   | 285 7   | 221 25  | 235 10  | 198 47  | 174 34 |
|       | 31 279 3  | 344 40  | 293 1   | —       | 223 8   | 239 00  | 199 22  | 174 22 |

Ayanamasa: 21° 19' 18"

## Longitude of the Moon

| 1922  | Sun.      | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|-------|-----------|--------|--------|--------|--------|--------|--------|
| Jan.  | 1 316 47  | 340 27 | 4 7    | 28 27  | 54 10  | 81 44  | 111 2  |
|       | 15 141 7  | 170 46 | 199 9  | 226 7  | 251 58 | 276 59 | 301 22 |
|       | 29 325 17 | 348 54 |        |        |        |        |        |
| Feb.  | 1 49 24   | 75 47  | 104 7  | 134 6  | 164 37 | 0 42   | 24 35  |
|       | 8 248 55  | 274 5  | 303 24 | 322 14 | 345 52 | 194 20 | 222 27 |
|       | 19        |        |        |        |        |        |        |
| March | 1 53 10   | 84 43  | 112 39 | 142 12 | 172 35 | 9 33   | 37 37  |
|       | 5 257 54  | 283 8  | 307 20 | 331 1  | 354 39 | 202 34 | 231 8  |
|       | 19        |        |        |        |        | 18 33  | 43 00  |
| April | 1 165 57  | 195 47 | 225 2  | 252 54 | 279 4  | 108 15 | 136 32 |
|       | 9 351 17  | 15 11  | 39 45  | 65 12  | 303 49 | 327 40 |        |
|       | 23        |        |        |        |        |        |        |
| May   | 1 175 33  | 204 34 | 233 14 | 260 52 | 287 3  | 118 48 | 146 51 |
|       | 7 359 24  | 328 28 | 358 27 | 74 35  | 101 44 | 311 51 | 335 45 |
|       | 21        |        |        |        |        | 129 35 |        |
| June  | 1 282 16  | 307 33 | 331 47 | 355 28 | 200 11 | 228 16 | 255 5  |
|       | 11 97 17  | 125 41 | 154 25 |        | 19 17  | 43 55  | 69 53  |
|       | 25        |        |        |        |        |        |        |
| July  | 1 290 50  | 315 44 | 339 24 | 3 27   | 210 52 | 238 16 | 264 58 |
|       | 9 105 54  | 135 1  | 164 31 | 193 32 | 27 15  | 51 47  | 78 4   |
|       | 23        |        |        |        | 221 34 |        |        |
| Aug.  | 1 235 11  | 261 42 | 287 20 | 312 9  | 336 17 | 359 37 |        |
|       | 13 23 34  | 47 42  | 72 59  | 99 57  | 128 42 | 158 5  | 188 39 |
|       | 27        | 217 44 | 245 24 | 271 40 |        |        |        |
|       |           |        |        |        |        |        | 284 22 |
| Sep.  | 1 309 4   | 331 8  | 356 49 | 20 24  | 44 17  | 68 54  | 94 52  |
|       | 3 122 29  | 151 47 | 182 1  | 212 11 | 241 1  | 268 13 | 293 47 |
|       | 17        |        |        |        |        |        |        |
| Oct.  | 1 318 13  | 342 00 | 366 36 | 29 20  | 53 29  | 78 21  | 104 15 |
|       | 15 131 32 | 160 19 | 190 13 | 220 20 | 249 30 | 276 56 | 302 36 |
|       | 29 116 57 | 350 5  |        |        |        |        |        |
|       |           |        |        |        |        |        | 2 25   |
| Nov.  | 1 50 26   | 75 24  | 101 10 | 127 49 | 155 30 | 184 14 | 213 43 |
|       | 5 243 6   | 271 25 | 298 4  | 323 6  | 347 3  | 10 38  |        |
|       | 19        |        |        |        |        |        | 34 32  |
| Dec.  | 1 59 11   | 84 47  | 111 16 | 138 26 | 166 9  | 194 23 | 223 00 |
|       | 3 251 35  | 279 23 | 305 52 | 330 54 | 354 53 | 11 30  | 42 27  |
|       | 17        |        |        |        |        |        |        |
|       | 31 67 22  |        |        |        |        |        |        |

Ayanamsa: 21° 19' 18"



## Longitudes of Planets

|       | 1923 | Sun    | Mars   | Merc.   | Merc.   | Jupit.  | Venus  | Saturn  | Rahu   |
|-------|------|--------|--------|---------|---------|---------|--------|---------|--------|
| Jan.  | 5    | 284 ■  | 348 20 | 300 47  | 307 46  | 223 56  | 241 57 | 199 35  | 174 6  |
|       | 15   | 294 20 | 355 40 | 313 2R  | 315 00R | 225 24  | 249 19 | 199 56  | 173 34 |
|       | 25   | 304 31 | 2 59   | 312 34  | 306 33  | 226 38  | 258 7  | 200 6R  | 173 8  |
| Feb.  | ■    | 314 40 | 10 15  | 301 19  | 299 13D | 227 38  | 267 52 | 200 5   | 172 31 |
|       | 14   | 324 47 | 17 29  | 300 14D | 303 28  | 228 22  | 278 16 | 199 54  | 171 59 |
|       | 24   | 334 52 | 24 39  | ■ 12    | —       | 228 43  | 289 7  | 199 32  | 171 27 |
| March | ■    | 344 54 | 31 46  | 320 29  | 327 36  | 228 56R | 300 18 | 199 ■   | 170 ■  |
|       | 16   | 354 53 | 38 49  | 335 16  | 343 27  | 228 45  | 311 44 | 198 25  | 170 24 |
|       | ■    | ■ 49   | 45 48  | 352 10  | 1 26    | 228 16  | 323 19 | 197 42  | 169 52 |
| April | 5    | 14 41  | 52 43  | 11 15   | 21 32   | 227 31  | 335 2  | 196 56  | 169 20 |
|       | 15   | 24 30  | 59 35  | 32 1    | 42 11   | 226 31  | 346 51 | 196 10  | 168 ■  |
|       | 25   | 34 16  | 66 23  | 51 22   | 59 3    | 225 21  | 358 44 | 195 26  | 168 17 |
| May   | 5    | 43 58  | 73 ■   | 64 56   | 68 52   | 224 5   | 10 40  | 194 46  | 167 45 |
|       | 15   | 53 38  | 79 49  | 70 ■    | 70 33R  | 222 9   | 22 40  | 194 12  | 167 13 |
|       | 25   | 63 15  | 86 27  | 68 41   | 65 57   | 221 39  | 34 41  | 193 46  | 166 ■  |
| June  | 4    | 72 50  | 93 3   | 63 30   | 62 20   | 220 38  | 46 44  | 193 29  | 166 10 |
|       | 14   | 82 24  | 99 35  | 62 56D  | 65 25   | 219 50  | 58 49  | 193 22D | 165 39 |
|       | 24   | 91 57  | 106 6  | 68 41   | 75 34   | 219 14  | 70 56  | 193 ■   | 165 ■  |
| July  | ■    | 101 29 | 112 34 | 82 59   | 91 49   | 219 4D  | 83 5   | 193 37  | 164 34 |
|       | 14   | 111 ■  | 119 00 | 101 47  | 112 23  | 219 ■   | 95 16  | 193 59  | 164 3  |
|       | 24   | 120 33 | 125 26 | 122 59  | 133 10  | 219 30  | 107 30 | 194 30  | 163 31 |
| Aug.  | 3    | 130 7  | 131 49 | 142 ■   | 151 38  | 220 9   | 121 00 | 195 10  | 162 59 |
|       | 13   | 139 42 | 138 12 | 159 52  | 167 ■   | 221 ■   | 132 5  | 195 57  | 162 27 |
|       | 23   | 149 19 | 144 25 | 174 28  | 180 40  | 222 12  | 144 27 | 191 51  | 161 56 |
| Sep.  | 2    | 158 59 | 150 56 | 186 3   | 190 19  | 223 34  | 150 50 | 197 51  | 161 ■  |
|       | 12   | 168 41 | 157 18 | 193 5   | 193 43R | 225 7   | 169 15 | 198 56  | 160 52 |
|       | 22   | 178 27 | 163 40 | 191 36  | ■ 53    | 226 5D  | 181 42 | 200 ■   | 160 20 |
| Oct.  | 2    | 188 15 | 170 1  | 181 33  | 178 50  | 228 42  | 194 10 | 201 15  | 159 49 |
|       | 12   | 198 8  | 176 23 | 180 23D | 185 30  | 230 40  | 206 38 | 202 27  | 159 17 |
|       | 22   | 208 ■  | 182 46 | 192 40  | 200 42  | 232 44  | 219 ■  | 203 40  | 158 45 |
| Nov.  | ■    | 218 2  | 189 9  | 208 59  | 217 15  | 234 53  | 231 37 | 204 53  | 158 13 |
|       | 11   | 228 4  | 195 32 | 225 ■   | 233 24  | 237 4   | 244 6  | 206 ■   | 157 41 |
|       | 21   | 238 9  | 201 56 | 241 18  | 249 7   | 239 17  | 256 35 | 207 12  | 157 ■  |
| Dec.  | ■    | 248 16 | 208 21 | 256 ■   | 264 36  | 241 31  | 269 ■  | 208 16  | 156 ■  |
|       | 11   | 258 26 | 214 46 | 272 17  | 279 50  | 243 ■   | 287 ■  | 209 14  | 156 6  |
|       | 21   | 268 36 | 221 11 | 287 1   | 293 21  | 245 54  | 294 00 | 210 7   | 155 34 |
|       | 31   | 278 46 | 227 37 | 297 48  | —       | 248 00  | 301 25 | 210 52  | 155 3  |

Ayanamas: 21° 20' 8"

## Longitude of the Moon

| 1923    | Sun.   | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  |        |        |        |        | 80 17  | 107 3  | 134 46 |
| 7       | 162 57 | 191 11 | 219 19 | 247 11 | 274 33 | 301 2  | 326 25 |
| 21      | 350 46 | 14 28  | 38 9   | 62 31  | 88 10  | 115 21 |        |
| Feb. 1  |        |        | 129 28 | 158 22 | 187 28 | 216 8  | 244 1  |
| 11      | 271 2  | 297 10 | 322 25 | 346 52 | 10 42  | 34 18  | 58 13  |
| 25      | 83 4   | 109 23 |        |        |        |        |        |
| March 1 |        |        | 137 26 | 166 53 | 196 51 | 226 16 | 254 27 |
| 11      | 281 14 | 306 48 | 331 27 | 355 29 | 19 11  | 42 49  | 66 46  |
| 25      | 91 32  | 117 37 | 146 26 | 174 54 |        |        |        |
| April 1 | 190 3  | 220 27 | 249 56 | 277 44 | 303 49 | 328 34 | 352 32 |
| 15      | 16 10  | 39 49  | 63 44  | 88 12  | 113 34 | 140 13 | 168 29 |
| 29      | 198 15 |        |        |        |        |        |        |
| May 1   |        | 228 41 | 258 29 | 286 37 | 312 50 | 337 32 | 1 22   |
| 13      | 24 57  | 48 44  | 72 58  | 97 49  | 123 26 | 150 ■  | 177 57 |
| 27      | 207 10 | 237 7  | 264 43 |        |        |        |        |
| June 1  |        |        |        |        |        |        | 281 1  |
| 3       | 308 17 | 333 46 | 358 00 | 21 39  | 45 24  | 69 40  | 94 40  |
| 17      | 120 ■  | 146 25 | 174 20 | 202 36 | 231 36 | 260 47 | 289 15 |
| July 1  | 316 18 | 341 47 | 6 ■    | 29 48  | 53 ■   | 78 9   | 103 38 |
| 15      | 130 5  | 157 21 | 185 12 | 213 28 | 241 57 | 270 16 | 297 55 |
| 29      | 324 26 | 349 42 |        |        |        |        |        |
| Aug. 1  |        |        |        |        |        | 1 56   | 25 52  |
| 5       | 49 37  | 73 48  | ■ 59   | 125 26 | 153 5  | 181 31 | 210 13 |
| 19      | 238 ■  | 266 39 | 293 52 | 320 10 | 345 30 | 9 59   | 33 51  |
| Sep. 1  |        |        |        | 45 43  | 69 35  | 94 11  | 120 3  |
| 9       | 147 29 | 176 18 | 205 49 | 235 8  | 263 32 | 290 43 | 316 47 |
| 23      | 341 55 | 6 22   | 30 19  | 54 1   |        |        |        |
| Oct. 1  |        |        |        |        | 77 52  | 102 21 | 128 4  |
| 7       | 155 ■  | 184 35 | 214 48 | 244 52 | 273 41 | 300 50 | 326 30 |
| 21      | 351 0  | 15 13  | 39 00  | 62 ■   | ■ 39   | 111 7  |        |
| Nov. 1  |        |        | 123 42 | 149 ■  | 177 57 | 207 42 | 238 20 |
| 11      | 268 24 | 296 47 | 323 14 | ■ 11   | 12 15  | 35 59  | 59 ■   |
| 25      | 83 43  | 108 6  | 133 8  |        |        |        |        |
| Dec. 1  |        |        |        | 159 ■  | ■ 49   | 216 ■  | 246 ■  |
| 9       | 276 29 | 305 8  | 331 50 | 356 53 | 20 56  | 44 37  | 68 27  |
| 23      | 92 43  | 117 33 | 143 3  | 169 22 | 196 ■  |        |        |

Ayanamsa: 21° 20' 8"

## Longitudes of Planets

| 1924  | Sun       | Mars    | Merc.   | Merc.    | Jupit.  | Venus   | Saturn  | Rahu   |
|-------|-----------|---------|---------|----------|---------|---------|---------|--------|
| Jan.  | ■ 283 53  | 230 49  | 298 40  | ■ 205 6R | 249 2   | 312 38  | 211 11  | 154 47 |
| 15    | 294 5     | 237 15  | 288 42  | 283 57   | 251 00  | 324 59  | 211 43  | 154 15 |
| 25    | ■ ■ 0     | 243 40  | 282 53D | 284 55D  | 252 50  | 337 17  | 212 ■   | 153 43 |
| Feb.  | ■ 314 25  | 250 5   | 288 ■   | 294 18   | 254 31  | 340 30  | 212 18  | 153 11 |
| 14    | 324 32    | 256 ■   | 300 39  | 307 16   | 256 2   | 1 36    | 212 20R | 152 40 |
| 24    | ■ ■ 37    | 263 51  | 314 33  | 322 16   | 257 20  | 13 34   | 212 11  | 152 8  |
| March | ■ 344 39  | 269 11  | 330 26  | 339 ■    | 258 ■   | 25 21   | 211 52  | 151 ■  |
| 15    | 354 39    | 275 29  | 348 10  | 357 45   | 259 11  | 36 55   | 211 24  | 151 4  |
| 25    | 4 34      | 281 ■   | 7 45    | 17 56    | 259 42  | ■ 13    | 210 49  | 150 33 |
| April | ■ 14 27   | 287 54  | 27 48   | 36 37    | 259 54R | 59 10   | 210 8   | 150 1  |
| 14    | 24 16     | 293 58  | 43 41   | 48 33    | 259 47  | 69 40   | 209 23  | 149 9  |
| 24    | 34 1      | 299 54  | 51 3R   | 51 8R    | 259 23  | 79 34   | 208 33  | 148 57 |
| May   | ■ 43 44   | 305 41  | 49 15   | 40 18    | 258 40  | ■ 40    | 207 53  | 148 25 |
| 14    | 53 24     | 311 14  | 43 ■    | 42 9D    | 257 44  | 96 37   | 207 12  | 147 54 |
| 24    | 63 ■      | 316 41  | 42 32D  | 44 45    | 257 36  | 102 54  | 206 37  | 147 22 |
| June  | 3 72 36   | 321 ■   | 43 37   | 53 58    | 255 21  | 106 47  | 206 8   | 146 50 |
| 13    | 82 10     | 325 49  | 60 ■    | ■ 33     | 254 5   | 107 21R | 205 40  | 146 18 |
| 23    | 91 43     | 329 36  | 77 39   | 87 47    | 252 53  | 104 2   | 205 39  | 145 47 |
| July  | 3 101 15  | 332 35  | 98 31   | 109 20   | 251 49  | 98 7    | 205 38D | 145 15 |
| 13    | 110 47    | 334 ■   | 119 43  | 129 25   | 250 58  | ■ 54    | 205 48  | 144 43 |
| 23    | ■ ■ ■     | 18R     | 138 24  | 146 37   | 250 23  | 91 4D   | 206 7   | 144 11 |
| Aug.  | 2 120 ■   | 334 46  | 154 7   | 160 50   | 250 5   | 92 59   | 206 35  | 143 40 |
| 12    | 130 ■     | 333 3   | 166 41  | 171 31   | 250 6D  | 97 51   | 207 12  | 143 ■  |
| 22    | 140 5     | 330 34  | 175 ■   | 176 40R  | 250 25  | 104 46  | 207 56  | 142 ■  |
| Sept. | 1 158 ■   | 328 00  | 176 20R | 173 20   | 251 2   | 113 9   | 208 48  | 142 ■  |
| 11    | 168 27    | ■ 6     | 183 31  | 164 11D  | 251 55  | 122 ■   | 209 46  | 141 ■  |
| ■     | 178 12    | 325 20D | 162 45D | 165 19   | 253 ■   | 132 37  | 210 48  | 141 00 |
| Oct.  | 1 188 1   | 325 53  | 171 8   | 178 53   | 254 26  | 143 18  | 211 55  | 140 29 |
| 11    | 197 53    | 327 41  | 187 ■   | 196 7    | 256 00  | 154 23  | 213 5   | 139 57 |
| 21    | 207 49    | 330 34  | 194 47  | 213 3    | 257 45  | 165 40  | 214 16  | 139 25 |
| 31    | 217 46    | 334 18  | 221 12  | —        | 259 33  | 177 30  | 215 29  | 138 ■  |
| Nov.  | 10 227 50 | 338 44  | 236 50  | 244 35   | 261 40  | 189 25  | 216 41  | 138 22 |
| 20    | 237 ■     | 343 41  | 252 7   | 259 29   | 263 47  | 201 29  | 217 51  | 137 50 |
| ■     | 248 1     | 349 3   | 266 7   | ■ 16     | 265 59  | 213 42  | 219 00  | 137 18 |
| Dec.  | 10 258 11 | 354 43  | 278 54  | 282 30R  | 268 14  | 225 59  | 220 ■   | 136 46 |
| 20    | 268 21    | 0 37    | 282 30R | 277 ■    | 270 31  | 238 22  | 221 3   | 136 15 |
| 30    | 278 33    | 6 42    | 281 17  | —        | 273 3   | 242 ■   | 222 2   | 135 43 |

Ayanamsa : 21° 20' 58"

# RAMAN'S EPHEMERIS

## Longitude of the Moon

| 1924    | Sun    | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  |        | 210 58 | 240 7  | 269 47 | 298 52 | 326 32 | 352 31 |
| 13      | 17 7   | 40 59  | 64 44  | 88 56  | 113 52 | 139 40 | 166 16 |
| 27      | 193 38 | 221 40 | 250 14 |        |        |        |        |
| Feb. 1  |        |        |        |        |        |        | 264 35 |
| 3       | 293 8  | 320 53 | 347 26 | 12 41  | 36 55  | 60 42  | 84 39  |
| 17      | 109 19 | 135 6  | 162 4  | 190 00 | 218 27 | 246 57 | 275 7  |
| March 1 |        |        |        | 289 1  | 316 16 | 342 41 | 8 9    |
| 9       | 32 44  | 56 40  | 80 27  | 104 38 | 129 52 | 156 34 | 184 47 |
| 23      | 214 1  | 243 21 | 271 59 | 299 34 | 326 5  |        |        |
| April 1 |        | 339 1  | 4 17   | 28 53  | 52 57  | 76 42  | 100 32 |
| 13      | 125 4  | 160 55 | 178 32 | 207 53 | 238 4  | 267 51 | 296 16 |
| 27      | 323 9  | 348 45 |        |        |        |        |        |
| May 1   |        |        | 13 30  | 37 43  | 61 35  | 85 18  | 109 9  |
| 11      | 133 37 | 159 18 | 186 47 | 216 9  | 246 40 | 276 58 | 305 49 |
| 25      | 332 50 | 358 19 | 22 47  | 46 44  |        |        |        |
| June 1  | 58 37  | 82 21  | 106 12 | 130 26 | 155 29 | 181 53 | 210 2  |
| 15      | 239 49 | 270 20 | 300 11 | 328 23 | 354 43 | 19 40  | 43 44  |
| 29      | 67 29  |        |        |        |        |        |        |
| July 1  |        | 91 16  | 115 20 | 139 56 | 165 18 | 191 48 | 219 42 |
| 13      | 248 56 | 278 51 | 308 24 | 336 36 | 3 7    | 28 10  | 52 16  |
| 27      | 76 1   | 99 54  | 124 18 |        |        |        |        |
| Aug. 1  |        |        |        |        |        |        | 136 46 |
| 3       | 162 18 | 188 44 | 216 8  | 244 28 | 273 26 | 302 29 | 330 53 |
| 17      | 358 3  | 23 49  | 48 23  | 72 16  | 96 4   | 120 21 | 145 32 |
| 31      | 171 47 |        |        |        |        |        |        |
| Sep. 1  |        |        |        |        | 185 18 | 212 58 | 241 11 |
| 7       | 269 36 | 297 55 | 325 50 | 352 59 | 19 6   | 44 8   | 68 17  |
| 21      | 92 1   | 116 00 | 140 50 | 167 4  | 194 36 |        |        |
| Oct. 1  |        |        |        |        |        | 223 12 | 252 5  |
| 5       | 280 36 | 308 26 | 335 31 | 1 53   | 27 28  | 52 14  | 76 16  |
| 19      | 99 57  | 123 51 | 148 38 | 174 58 | 203 4  | 232 31 | 262 51 |
| Nov. 1  |        |        |        | 276 53 | 305 18 | 332 27 | 358 36 |
| 9       | 23 55  | 48 36  | 72 43  | 96 25  | 120 5  | 144 14 | 169 34 |
| 23      | 106 43 | 225 48 | 256 6  | 280 17 |        |        |        |
| Dec. 1  |        |        |        |        | 315 13 | 342 11 | 8 21   |
| 7       | 11 11  | 57 34  | 81 26  | 105 6  | 128 49 | 153 1  | 178 14 |
| 21      | 205 5  | 233 50 | 264 4  | 294 34 | 324 1  | 351 44 |        |

Ayanamsa: 21° 20' 58"

## Longitudes of Planets

|       | 1925 | Sun    | Mars.  | Merc.   | Merc.   | Jupit.  | Venus  | Saturn  | Rahu   |
|-------|------|--------|--------|---------|---------|---------|--------|---------|--------|
| Jan.  | 5    | 284 40 | 10 25  | 266 55R | 267 ■   | 274 11  | 258 15 | 222 25  | 135 24 |
|       | 15   | 294 51 | 16 41  | 271 00  | 276 3   | 276 27  | 270 43 | 223 7   | 134 52 |
|       | 25   | 305 8  | 23 1   | 282 4   | 288 42  | 278 40  | 283 12 | 223 39  | 134 20 |
| Feb.  | ■    | 315 11 | 29 25  | 295 48  | 303 17  | 280 48  | 295 41 | 224 ■   | 133 48 |
|       | 14   | 325 11 | 35 50  | 311 7   | 319 ■   | 282 50  | 308 10 | 224 16  | 133 17 |
|       | 24   | 335 ■  | 42 10  | 327 53  | 336 53  | 284 45  | 320 29 | 224 19R | 132 45 |
| March | 6    | 345 25 | 48 ■   | 346 17  | 356 1   | 286 31  | 333 6  | 224 11  | 132 13 |
|       | ■    | 355 23 | 55 10  | 5 50    | 15 11   | 288 6   | 345 33 | 223 54  | 131 41 |
|       | 26   | 5 19   | 61 36  | 26 11   | 29 2    | 289 30  | 357 59 | 223 27  | 131 10 |
| April | 5    | 15 11  | 68 1   | 32 10R  | 32 26R  | 290 39  | 10 24  | 222 53  | 130 38 |
|       | 15   | 25 00  | 74 25  | 30 17   | 26 52   | 291 33  | 22 47  | 222 13  | 130 6  |
|       | 25   | 34 45  | 80 49  | 23 45   | 22 ■    | 292 10  | 35 9   | 221 29  | 129 34 |
| May   | ■    | 44 28  | 87 11  | 22 27D  | 24 40   | 292 29  | 47 29  | 220 44  | 129 3  |
|       | 15   | 54 7   | 93 32  | 28 31   | 33 43   | 292 29R | 59 48  | 220 00  | 128 30 |
|       | 25   | ■ 45   | 99 52  | 40 7    | 47 34   | 292 10  | 72 6   | 219 ■   | 127 59 |
| June  | ■    | 73 20  | 106 12 | 56 ■    | 65 34   | 291 34  | 84 23  | 218 42  | 127 27 |
|       | 14   | 82 53  | 112 31 | 75 55   | ■ 48    | 290 41  | 96 38  | 218 13  | 126 56 |
|       | 24   | 92 26  | 118 49 | 97 41   | 108 ■   | 289 36  | 108 53 | 217 52  | 126 24 |
| July  | 4    | 101 58 | 125 8  | 117 44  | 126 33  | 288 23  | 121 6  | 217 40  | 125 52 |
|       | ■    | 111 30 | 131 36 | 134 32  | 141 38  | 287 6   | 133 18 | 217 38D | 125 20 |
|       | 24   | 121 3  | 137 45 | 147 50  | 152 58  | 285 51  | 145 29 | 217 45  | 124 48 |
| Aug.  | 3    | 130 36 | 144 4  | 156 49  | 159 3R  | 284 43  | 157 38 | 218 3   | 124 16 |
|       | 13   | 140 12 | 150 24 | 159 17R | 157 15  | 283 43  | 169 44 | 218 29  | 123 45 |
|       | 23   | 149 49 | 156 45 | 153 20  | 149 1   | 283 8   | 181 48 | 219 ■   | 123 13 |
| Sep.  | ■    | 159 22 | 163 ■  | 146 27D | 147 10  | 282 45  | 193 48 | 219 47  | 122 41 |
|       | 12   | 169 11 | 169 31 | 151 24  | 158 20  | 282 42D | 205 44 | 220 37  | 122 9  |
|       | 22   | 178 57 | 175 57 | 166 50  | 175 54  | 282 58  | 217 37 | 221 34  | 121 38 |
| Oct.  | 2    | ■ 46   | 182 25 | 184 59  | 193 49  | 283 32  | 229 ■  | 222 35  | 121 6  |
|       | 12   | 198 38 | 188 54 | 202 20  | 210 34  | 284 24  | 241 ■  | 223 41  | 120 34 |
|       | 22   | 208 34 | 195 26 | 218 31  | 226 15  | 285 22  | 252 36 | 224 50  | 120 ■  |
| Nov.  | 1    | 218 33 | 202 1  | 233 45  | 241 2   | 286 55  | 263 56 | 226 1   | 119 31 |
|       | 11   | 228 35 | 208 37 | 248 8   | 254 39  | 288 30  | 275 1  | 227 12  | 118 59 |
|       | 21   | 238 40 | 215 17 | 260 33  | ■ 7     | 290 17  | 285 45 | 228 24  | 118 27 |
| Dec.  | 1    | 248 47 | 222 00 | 267 12R | 265 17R | 292 13  | 295 ■  | 229 34  | 117 55 |
|       | 11   | 258 57 | 228 45 | ■ ■     | ■ 14    | 294 ■   | 305 ■  | 230 42  | 117 24 |
|       | 21   | 269 7  | 235 31 | 250 55D | 252 34D | 296 ■   | 313 52 | 231 46  | 116 51 |
|       | 31   | 279 19 | 242 24 | 256 48  | —       | 298 ■   | 320 39 | 232 46  | 116 20 |

Ayanamsa: 21° 21' 49''

## Longitude of the Moon

| 1925    | Sun.   | Tue.   | Thurs. | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  |        |        | 1 13   | 30 15  | 54 34  | 78 23  | 102 4  |
| 11      | 125 52 | 150 3  | 174 56 | 200 55 | 228 22 | 257 20 | 287 20 |
| 25      | 317 20 | 346 12 | 13 22  | 54     |        |        |        |
| Feb. 1  | 51 10  | 75 8   | 98 46  | 122 35 | 146 54 | 171 57 | 197 51 |
| 15      | 224 44 | 252 39 | 281 29 | 310 47 | 339 50 | 7 48   | 34 16  |
| March 1 | 50 16  | 83 17  | 106 56 | 130 51 | 155 22 | 181 14 | 207 57 |
| 15      | 235 23 | 263 28 | 291 48 | 320 14 | 348 25 | 15 51  | 42 6   |
| 29      | 57 6   | 91 1   |        |        |        |        |        |
| April 1 |        |        |        |        |        | 102 58 | 126 42 |
| 8       | 151 5  | 176 40 | 203 37 | 231 39 | 260 10 | 288 37 | 316 41 |
| 19      | 344 11 | 11 19  | 37 34  | 62 49  | 87 8   | 110 51 |        |
| May 1   |        |        |        |        |        |        | 134 22 |
| 3       | 158 57 | 184 43 | 212 8  | 240 56 | 270 18 | 299 19 | 327 28 |
| 17      | 354 41 | 21 2   | 46 34  | 71 20  | 100 24 | 119 1  | 142 42 |
| 31      | 167 1  |        |        |        |        |        |        |
| June 1  |        |        |        |        | 179 44 | 206 40 | 234 46 |
| 7       | 264 31 | 294 30 | 323 41 | 351 33 | 18 5   | 41 32  | 68 1   |
| 21      | 52 11  | 115 49 | 139 25 | 163 23 | 188 20 |        |        |
| July 1  |        |        |        |        |        | 214 48 | 243 5  |
| 5       | 272 11 | 291 16 | 332 58 | 1 13   | 27 48  | 53 1   | 77 19  |
| 19      | 101 4  | 124 39 | 148 22 | 172 33 | 197 36 | 222 14 | 251 53 |
| Aug. 1  |        |        |        | 266 27 | 296 25 | 326 39 | 355 59 |
| 9       | 22 41  | 49 39  | 74 15  | 98 1   | 121 38 | 145 23 | 169 39 |
| 23      | 194 37 | 220 31 | 247 32 | 275 48 | 305 1  |        |        |
| Sep. 1  |        | 320 2  | 349 41 | 18 11  | 41 11  | 70 33  | 94 40  |
| 13      | 118 17 | 142 00 | 166 20 | 191 29 | 217 31 | 244 22 | 271 58 |
| 27      | 300 18 | 320 12 |        |        |        |        |        |
| Oct. 1  |        |        | 358 9  | 26 22  | 53 11  | 78 11  | 102 41 |
| 11      | 126 19 | 150 8  | 174 15 | 200 30 | 227 19 | 254 54 | 282 53 |
| 25      | 311 2  | 339 16 | 7 20   | 11 48  |        |        |        |
| Nov. 1  | 48 10  | 73 57  | 98 11  | 122 20 | 145 50 | 170 11 | 195 11 |
| 15      | 222 22 | 250 31 | 279 12 | 307 51 | 336 2  | 1 11   | 24 41  |
| 29      | 56 53  |        |        |        |        |        |        |
| Dec. 1  |        | 82 1   | 106 30 | 130 11 | 153 51 | 178 00 | 203 11 |
| 13      | 230 23 | 259 00 | 288 31 | 318 1  | 346 41 | 14 11  | 40 39  |
| 27      | 66 7   | 90 47  | 114 50 |        |        |        |        |

Ayanamsa: 21° 21' 49"

## Longitudes of Planets

| 1926  | Sun       | Mars   | Merc.   | Merc.   | Jupit.  | Venus   | Saturn  | Rahu   |
|-------|-----------|--------|---------|---------|---------|---------|---------|--------|
| Jan.  | 5 284 25  | 245 50 | 262 27  | 268 55  | 299 53  | 323 11  | 233 13  | 116 1  |
|       | 15 294 31 | 252 45 | 275 51  | 273 9   | 302 13  | 325 57R | 234 4   | 115 32 |
|       | 25 304 47 | 259 43 | 290 42  | 274 32  | 304 35  | 324 52  | 234 45  | 115 1  |
| Feb.  | 1 114 56  | 266 44 | 306 41  | 315 5   | 306 57  | 320 2   | 235 20  | 114 29 |
|       | 11 224 3  | 273 47 | 323 50  | 332 58  | 309 17  | 314 5   | 235 45  | 113 57 |
|       | 24 335 8  | 280 53 | 342 21  | 341 46  | 311 15  | 310 37D | 236 00  | 113 25 |
| March | 6 345 10  | 288 1  | 0 39    | 8 5     | 313 49  | 311 6   | 236 5R  | 112 53 |
|       | 16 355 9  | 295 12 | 13 2    | 14 45R  | 315 11  | 315 1   | 235 59  | 112 21 |
|       | 26 5 1    | 302 23 | 13 15R  | 9 34    | 318 00  | 321 25  | 235 44  | 111 50 |
| April | 1 14 57   | 309 37 | 5 37    | 3 1     | 319 54  | 329 26  | 235 20  | 111 18 |
|       | 11 24 46  | 316 51 | 2 40D   | 4 21    | 321 38  | 338 33  | 234 47  | 110 46 |
|       | 25 34 31  | 324 5  | 7 47    | 12 35   | 323 10  | 348 24  | 234 9   | 110 15 |
| May   | 1 44 14   | 331 18 | 18 33   | 25 29   | 324 30  | 358 11  | 233 26  | 109 43 |
|       | 15 54 54  | 338 20 | 33 19   | 48 2    | 325 36  | 9 35    | 232 41  | 109 11 |
|       | 25 65 31  | 345 37 | 51 37   | 61 59   | 326 25  | 20 38   | 231 57  | 108 39 |
| June  | 4 73 6    | 352 41 | 72 52   | 84 11   | 326 57  | 31 54   | 231 15  | 108 1  |
|       | 14 82 40  | 359 38 | 94 17   | 103 57  | 327 10R | 43 20   | 230 38  | 107 36 |
|       | 24 92 12  | 6 26   | 112 40  | 120 26  | 327 1   | 54 54   | 230 7   | 107 1  |
| July  | 4 101 44  | 13 1   | 127 11  | 132 51  | 326 39  | 66 36   | 229 44  | 106 32 |
|       | 14 111 17 | 11 26  | 137 15  | 140 9   | 325 56  | 78 23   | 229 30  | 106 1  |
|       | 24 120 49 | 25 29  | 141 15R | 140 17R | 324 58  | 90 16   | 229 25D | 105 28 |
| Aug.  | 3 129 23  | 31 10  | 137 26  | 133 35  | 323 48  | 102 15  | 229 31  | 104 51 |
|       | 13 139 58 | 36 21  | 130 23D | 129 25D | 322 31  | 114 19  | 229 44  | 104 25 |
|       | 23 149 11 | 40 54  | 131 29  | 136 25  | 321 13  | 126 28  | 230 9   | 103 54 |
| Sep.  | 1 159 15  | 44 42  | 144 6   | 153 3   | 319 59  | 138 42  | 230 41  | 103 22 |
|       | 12 168 58 | 47 30  | 162 23  | 172 00  | 318 55  | 151 00  | 231 22  | 102 50 |
|       | 22 178 43 | 49 8   | 181 8   | 181 53  | 318 1   | 168 12  | 232 10  | 102 18 |
| Oct.  | 2 188 32  | 49 23R | 198 15  | 206 15  | 317 11  | 175 48  | 233 1   | 101 46 |
|       | 12 198 24 | 48 9   | 213 07  | 221 20  | 317 19D | 181 10  | 234 5   | 101 14 |
|       | 22 208 21 | 45 36  | 224 24  | 235 5   | 317 26  | 200 47  | 235 10  | 100 43 |
| Nov.  | 1 218 19  | 42 14  | 241 14  | 246 29  | 317 52  | 213 19  | 236 18  | 100 11 |
|       | 11 228 21 | 38 50  | 250 14R | 251 10R | 318 37  | 225 12  | 237 28  | 99 31  |
|       | 21 238 21 | 36 11  | 248 31  | 242 15  | 319 40  | 238 26  | 238 39  | 99 7   |
| Dec.  | 1 248 33  | 34 14  | 236 31  | 235 16D | 320 59  | 251 00  | 239 50  | 98 36  |
|       | 11 258 42 | 34 39D | 237 52  | 242 15  | 322 32  | 263 26  | 241 00  | 97 4   |
|       | 21 268 52 | 35 50  | 249 5   | 245 57  | 324 17  | 246 9   | 242 8   | 97 32  |
|       | 31 279 4  | 38 3   | 263 11  | —       | 326 12  | 248 11  | 243 13  | 97 00  |

Ayanamsa: 21° 22' 39"



# RAMAN'S EPHEMERIS Longitude of the Moon

| 1926    | Sun    | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  |        |        |        |        |        |        |        |
| 3       | 150 17 | 174 5  | 198 40 | 224 37 | 252 20 | 281 41 | 128 41 |
| 17      | 341 52 | 10 32  | 37 35  | 63 11  | 87 44  | 111 40 | 311 56 |
| 31      | 158 59 |        |        |        |        |        | 135 19 |
| Feb. 1  |        |        |        |        | 170 54 | 195 8  | 220 16 |
| 7       | 246 45 | 274 55 | 304 39 | 335 7  | 5 1    | 33 21  | 59 48  |
| 21      | 84 43  | 108 41 | 132 17 | 155 57 |        |        |        |
| March 1 |        |        |        |        | 170 38 | 204 33 | 229 53 |
| 7       | 250 15 | 281 11 | 313 6  | 343 10 | 11 4   | 41 37  | 58 18  |
| 21      | 58 18  | 117 15 | 140 50 | 164 37 | 188 59 | 214 5  |        |
| April 1 |        |        | 226 51 | 253 8  | 280 13 | 308 17 | 337 17 |
| 11      | 111    | 35 38  | 63 9   | 89 00  | 113 22 | 137 11 | 160 55 |
| 25      | 185 11 | 210 22 | 236 30 |        |        |        |        |
| May 1   |        |        |        | 263 24 | 290 59 | 319 3  | 347 12 |
| 9       | 111    | 44 13  | 71 14  | 96 53  | 121 20 | 145 7  | 168 53 |
| 23      | 193 18 | 218 48 | 245 32 | 273 10 | 301 36 |        |        |
| June 1  |        | 315 50 | 344 16 | 12 24  | 40 00  | 66 46  | 92 10  |
| 13      | 117 14 | 141 12 | 164 54 | 188 56 | 213 54 | 240 14 | 268 3  |
| 27      | 296 57 | 326 13 |        |        |        |        |        |
| July 1  |        |        | 355 7  | 23 10  | 50 10  | 76 10  | 101 15 |
| 11      | 125 36 | 149 27 | 173 7  | 197 7  | 222 00 | 245 18 | 276 17 |
| 25      | 305 43 | 335 46 | 5 10   | 33 35  |        |        |        |
| Aug. 1  | 47     | 73 11  | 98 9   | 122 24 | 146 13 | 169 54 | 193 42 |
| 15      | 218 3  | 243 26 | 270 21 | 290    | 329 13 | 359 41 | 20 10  |
| 29      | 56 27  | 82 18  |        |        |        |        |        |
| Sep. 1  |        |        |        |        |        | 95 15  | 119 19 |
| 5       | 143 16 | 166 56 | 190 46 | 214 57 | 239 49 | 265 45 | 293 14 |
| 19      | 322 25 | 352 47 | 23 5   | 52 1   | 79 00  | 104 15 |        |
| Oct 1   |        |        |        |        |        |        | 128 23 |
| 3       | 153 1  | 175 47 | 199 51 | 224 24 | 249 35 | 275 38 | 302 53 |
| 17      | 331 32 | 1 18   | 31 13  | 60 6   | 87 12  | 112 25 | 136 47 |
| 31      | 150 29 |        |        |        |        |        |        |
| Nov. 1  |        |        |        |        | 172 21 | 196 24 | 221 5  |
| 7       | 246 30 | 272 40 | 298 11 | 327 25 | 356 5  | 25 13  | 54 1   |
| 21      | 81 43  | 107 53 | 132 41 | 156 38 | 180 23 |        |        |
| Dec. 1  |        |        |        |        |        | 204 32 | 229 32 |
| 5       | 255 34 | 282 33 | 310 15 | 338 24 | 6 40   | 35 3   | 62 52  |
| 19      | 89 49  | 115 39 | 140 25 | 164 25 | 188 10 | 212 18 | 237 24 |

Ayanamsa: 21° 22' 39"

## Longitudes of Planets

| 1927  | Sun       | Mars   | Merc.   | Merc.   | Jupit.  | Venus   | Saturn  | Rahu  |
|-------|-----------|--------|---------|---------|---------|---------|---------|-------|
| Jan.  | 5 254 10  | 39 29  | 270 39  | 278 17  | 327 13  | 295 00  | 243 43  | 90 44 |
|       | 15 294 21 | 41 55  | 286 7   | 294 10  | 329 21  | 307 11  | 244 41  | 98 12 |
|       | 25 304 31 | 46 56  | 300 20  | 310 59  | 331 35  | 320 5   | 245 32  | 95 41 |
| Feb.  | 4 314 41  | 51 23  | 319 47  | 326 46  | 333 54  | 332 35  | 246 15  | 95 0  |
|       | 14 324 48 | 56 11  | 337 44  | 346 6   | 336 16  | 345 1   | 246 50  | 94 37 |
|       | 24 334 54 | 61 17  | 352 55  | 356 54  | 338 41  | 357 28  | 247 17  | 91 1  |
| March | 6 344 55  | 66 34  | 357 9R  | 361 59  | 341 5   | 9 50    | 247 33  | 93 33 |
|       | 16 354 54 | 72 2   | 349 16  | 345 28  | 343 83  | 22 7    | 247 40R | 93 1  |
|       | 26 4 50   | 77 38  | 343 55D | 344 47  | 345 52  | 11 20   | 247 36  | 92 30 |
| April | 5 14 43   | 83 19  | 347 37  | 351 58  | 348 11  | 46 26   | 247 23  | 91 58 |
|       | 15 24 31  | 89 6   | 357 30  | 3 59    | 350 26  | 58 27   | 247 1   | 91 26 |
|       | 25 34 17  | 94 56  | 11 17   | 19 22   | 352 35  | 70 19   | 246 30  | 90 55 |
| May   | 5 44 00   | 100 50 | 23 12   | 37 47   | 354 26  | 82 1    | 245 11  | 90 11 |
|       | 15 53 39  | 106 47 | 48 6    | 58 55   | 356 29  | 93 37   | 245 11  | 89 51 |
|       | 25 63 17  | 112 47 | 69 55   | 80 17   | 358 19  | 104 58  | 244 27  | 89 20 |
| June  | 4 72 52   | 118 48 | 89 53   | 98 26   | 359 44  | 116 1   | 243 43  | 88 53 |
|       | 14 82 22  | 124 52 | 105 50  | 112 3   | 1 2     | 126 50  | 243 00  | 88 16 |
|       | 24 91 58  | 130 58 | 116 57  | 120 23  | 2 6     | 137 10  | 242 22  | 87 44 |
| July  | 4 101 31  | 137 7  | 122 4R  | 121 52  | 2 53    | 146 57  | 241 50  | 87 13 |
|       | 14 111 3  | 143 7  | 119 49  | 116 36  | 3 21    | 155 56  | 241 25  | 86 41 |
|       | 24 120 35 | 149 30 | 119 29  | 111 50D | 3 31R   | 163 50  | 241 9   | 86 1  |
| Aug.  | 4 130 9   | 155 45 | 112 11  | 115 11  | 3 21    | 170 1   | 241 2D  | 85 37 |
|       | 13 139 44 | 162 1  | 121 50  | 129 51  | 2 52    | 174 1   | 241 1   | 85 1  |
|       | 23 149 21 | 168 24 | 139 12  | 149 6   | 2 5     | 174 49R | 241 17  | 84 35 |
| Sep.  | 2 159 1   | 174 48 | 158 54  | 168 20  | 1 3     | 171 44  | 241 38  | 84 1  |
|       | 12 168 43 | 181 15 | 177 18  | 185 48  | 359 50  | 165 56  | 242 9   | 83 30 |
|       | 22 178 20 | 187 45 | 193 52  | 201 32  | 358 30  | 160 42  | 242 53  | 82 58 |
| Oct.  | 2 188 18  | 194 19 | 208 48  | 215 39  | 357 11  | 158 52D | 243 35  | 82 27 |
|       | 12 198 10 | 200 57 | 221 59  | 227 37  | 355 58  | 160 51  | 244 23  | 81 55 |
|       | 22 208 5  | 207 53 | 232 12  | 235 1   | 354 56  | 165 54  | 245 27  | 81 23 |
| Nov.  | 1 218 4   | 214 24 | 235 10R | 231 31  | 354 11  | 173 0   | 246 30  | 80 51 |
|       | 11 228 6  | 221 14 | 225 10  | 220 18  | 353 44  | 181 47  | 247 37  | 80 20 |
|       | 21 238 11 | 228 1  | 219 54D | 223 22  | 353 37D | 191 30  | 248 47  | 79 48 |
| Dec.  | 1 248 18  | 235 7  | 229 4   | 235 50  | 353 51  | 201 56  | 249 58  | 79 16 |
|       | 11 258 27 | 242 10 | 243 7   | 250 37  | 354 25  | 212 54  | 251 9   | 78 44 |
|       | 21 268 38 | 249 17 | 258 16  | 265 59  | 355 18  | 224 15  | 252 19  | 68 12 |
|       | 31 278 40 | 256 1  | 273 50  | —       | 356 28  | 235 53  | 253 27  | 67 41 |

Ayanamsa: 21° 23' 29"

## Longitude of the Moon

|       | 1927 | Sun.   | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|-------|------|--------|--------|--------|--------|--------|--------|--------|
| Jan.  | 1    |        |        |        | 250 26 | 277 34 | 305 13 | 334 46 |
|       | ■    | ■ 35   | 31 47  | ■ 9    | 85 40  | 111 21 | 136 14 | 160 26 |
|       | 23   | 184 14 | 208 3  | 232 ■  | 258 9  | 285 29 |        |        |
| Feb.  | 1    |        | ■ 47   | 329 18 | 359 11 | 28 19  | ■ 7    | ■ 34   |
|       | 13   | 107 00 | 132 41 | 156 53 | 180 44 | 204 28 | 228 28 | 253 17 |
|       | 27   | 279 32 |        |        |        |        |        |        |
| March | 1    |        | 307 40 | 337 31 | 8 3    | 37 52  | 66 00  | 92 25  |
|       | 15   | 117 31 | 141 49 | 165 44 | 189 30 | 213 18 | 237 24 | 262 12 |
|       | 27   | 288 ■  | 316 5  | 345 42 |        |        |        |        |
| April | 1    |        |        |        |        |        |        | 0 57   |
|       | 3    | 31 31  | 60 57  | 88 30  | 114 17 | 138 50 | 162 45 | 186 29 |
|       | 17   | 210 20 | 234 ■  | 259 11 | 284 42 | 311 30 | 339 51 | ■ 34   |
| May   | 1    | 39 44  | 69 6   | 96 51  | 122 49 | 147 28 | 171 22 | 195 7  |
|       | 15   | 219 7  | 243 38 | 268 50 | 294 52 | 321 54 | 350 1  | 19 4   |
|       | 29   | 48 27  | 77 17  |        |        |        |        |        |
| June  | 1    |        |        |        |        |        | 91 15  | 118 2  |
|       | 5    | 143 23 | 167 40 | 191 28 | 216 23 | 239 52 | 265 13 | 291 32 |
|       | 19   | 318 46 | 346 43 | 15 10  | 43 45  | 72 4   | 99 37  |        |
| July  | 1    |        |        |        |        |        |        | 126 3  |
|       | 3    | 151 19 | 175 37 | 199 26 | 223 22 | 248 00 | 273 47 | 300 51 |
|       | 17   | 328 59 | 357 38 | 26 13  | 54 21  | 81 50  | 108 34 | 134 27 |
|       | 31   | 159 25 |        |        |        |        |        |        |
| Aug.  | 1    |        |        |        |        | 171 36 | 195 32 | 219 17 |
|       | 7    | 243 27 | 268 42 | 295 30 | 323 53 | 353 15 | 22 38  | 51 13  |
|       | 21   | 78 41  | 105 9  | 130 46 | 155 41 | 179 59 | 203 48 |        |
| Sep.  | 1    |        |        | 215 37 | 239 25 | 263 57 | 289 54 | 317 42 |
|       | 11   | 347 13 | 17 28  | 47 9   | 75 26  | 102 12 | 127 46 | 152 32 |
|       | 25   | 176 45 | 200 35 | 224 14 |        |        |        |        |
| Oct.  | 1    |        |        |        | 248 2  | 272 29 | 298 16 | 325 54 |
|       | 9    | 355 25 | 25 59  | 56 12  | 84 55  | 111 51 | 137 18 | 161 47 |
|       | 23   | 185 43 | 209 26 | 233 9  | 257 7  | 281 42 |        |        |
| Nov.  | 1    |        | 294 23 | 320 ■  | 349 3  | 18 50  | 49 17  | 79 4   |
|       | 13   | 107 15 | 133 38 | 158 ■  | 182 38 | 206 20 | 230 50 | 254 9  |
|       | 27   | 278 48 | 304 15 |        |        |        |        |        |
| Dec.  | 1    |        |        | 331 47 | 358 37 | 27 40  | 57 25  | ■ 53   |
|       | 11   | 115 9  | 141 47 | 165 54 | 191 00 | 214 40 | 238 ■  | 262 55 |
|       | 25   | 288 10 | 314 20 | ■ 22   | 9 10   |        |        |        |

Ayanamsa: 21° 23' 29"

## Longitudes of Planets

|       | 1928 | Sun    | Mars   | Merc.   | Merc.   | Jupit. | Venus  | Saturn  | Rahu  |
|-------|------|--------|--------|---------|---------|--------|--------|---------|-------|
| Jan.  | 5    | 283 54 | 281 5  | 281 47  | 289 53  | 357 9  | 241 46 | 254 00  | 77 26 |
|       | 15   | 291 5  | 287 23 | 298 13  | 354 42  | 358 41 | 253 41 | 255 3   | 76 53 |
|       | 25   | 304 17 | 274 44 | 315 11  | 323 46  | 0 26   | 255 43 | 266 00  | 76 21 |
| Feb.  | 4    | 314 20 | 282 9  | 331 35  | 337 42  | 2 22   | 277 50 | 256 52  | 75 49 |
|       | 14   | 324 14 | 289 38 | 340 57  | 339 29R | 4 28   | 279 1  | 257 37  | 75 19 |
|       | 24   | 334 39 | 297 10 | 334 55R | 339 46  | 6 37   | 302 14 | 258 13  | 74 46 |
| March | 5    | 344 41 | 304 11 | 326 37  | 326 13D | 8 54   | 314 30 | 258 41  | 74 14 |
|       | 15   | 354 40 | 312 20 | 328 11  | 331 59  | 11 15  | 320 46 | 258 59  | 73 42 |
|       | 25   | 4 36   | 319 59 | 337 3   | 343 6   | 13 38  | 339 3  | 259 7R  | 73 11 |
| April | 4    | 14 28  | 327 38 | 349 57  | 357 29  | 16 1   | 351 20 | 259 6   | 72 39 |
|       | 14   | 15 17  | 331 18 | 5 11    | 14 34   | 18 28  | 3 37   | 258 54  | 72 7  |
|       | 24   | 34 3   | 342 57 | 24 6    | 14 17   | 20 51  | 15 54  | 258 34  | 71 35 |
| May   | 4    | 43 46  | 350 35 | 44 58   | 55 46   | 23 13  | 28 10  | 258 5   | 71 3  |
|       | 14   | 44 25  | 358 11 | 66 1    | 75 35   | 25 31  | 40 26  | 257 1   | 70 32 |
|       | 24   | 63 3   | 5 15   | 83 48   | 90 41   | 27 44  | 52 42  | 258 48  | 70 00 |
| June  | 3    | 72 38  | 13 14  | 11 7    | 100 00  | 29 52  | 54 58  | 256 1   | 69 21 |
|       | 13   | 82 12  | 20 38  | 102 7   | 102 23R | 31 52  | 77 14  | 255 21  | 68 56 |
|       | 23   | 91 45  | 27 56  | 100 52R | 11 9    | 33 43  | 89 31  | 254 33  | 68 25 |
| July  | 3    | 101 17 | 35 6   | 95 17   | 93 30   | 11 25  | 101 48 | 253 58  | 67 52 |
|       | 13   | 110 49 | 42 8   | 11 35D  | 95 55   | 36 54  | 114 6  | 253 30  | 67 21 |
|       | 23   | 120 21 | 49 00  | 100 29  | 107 9   | 38 10  | 126 25 | 252 58  | 66 49 |
| Aug.  | 1    | 129 55 | 55 40  | 115 36  | 125 18  | 39 10  | 138 44 | 252 40  | 66 18 |
|       | 12   | 139 30 | 62 7   | 135 31  | 145 40  | 39 54  | 151 4  | 252 31  | 65 11 |
|       | 22   | 149 7  | 68 19  | 155 23  | 164 33  | 40 19  | 163 24 | 252 31D | 65 14 |
| Sep.  | 1    | 158 47 | 74 11  | 173 11  | 181 18  | 40 25R | 175 45 | 252 42  | 64 42 |
|       | 11   | 168 29 | 79 42  | 188 56  | 196 4   | 40 11  | 188 4  | 253 1   | 64 10 |
|       | 21   | 178 11 | 84 46  | 202 40  | 201 38  | 39 37  | 200 24 | 253 30  | 63 38 |
| Oct.  | 1    | 188 1  | 89 19  | 213 44  | 217 34  | 38 45  | 212 43 | 254 18  | 63 7  |
|       | 11   | 197 55 | 93 12  | 219 30  | 218 33R | 37 39  | 225 1  | 254 53  | 62 35 |
|       | 21   | 207 51 | 11 17  | 214 13R | 208 1   | 36 22  | 237 17 | 255 45  | 62 3  |
|       | 31   | 217 49 | 98 22  | 204 1   | 204 42  | 35 1   | 249 33 | 256 32  | 61 32 |
| Nov.  | 10   | 227 51 | 99 16  | 209 00  | 215 22  | 34 41  | 261 46 | 257 45  | 61 00 |
|       | 20   | 237 56 | 11 48R | 222 10  | 230 20  | 31 30  | 273 57 | 258 51  | 60 23 |
|       | 30   | 247 1  | 96 53  | 238 8   | —       | 31 32  | 286 5  | 260 00  | 59 57 |
| Dec.  | 1    | 258 12 | 93 45  | 253 46  | 261 37  | 30 50  | 298 8  | 261 11  | 59 34 |
|       | 20   | 268 23 | 89 53  | 269 31  | 277 29  | 30 29  | 310 5  | 262 13  | 58 53 |
|       | 30   | 278 34 | 86 7   | 285 34  | —       | 30 28D | 321 52 | 263 13  | 58 21 |

Ayanamsa : 21° 24' 20"

1928 A.D.

## RAMAN'S EPHEMERIS

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Longitude of the Moon

| 1928    | Sun.   | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  | 23 19  | 51 59  | 80 47  | 109 7  | 136 24 | 162 18 | 186 56 |
| 15      | 210 44 | 234 23 | 258 41 | 283 54 | 310 22 | 337 53 | 6 00   |
| 29      | 24 18  | 52 22  |        |        |        |        |        |
| Feb. 1  |        |        |        |        |        | 76 28  | 104 10 |
| 5       | 131 22 | 157 59 | 212 32 | 236 41 | 230 21 | 254 13 | 278 58 |
| 19      | 206 9  | 332 54 | 1 44   | 30 47  | 59 20  | 87 7   |        |
| March 1 |        |        | 100 42 | 127 21 | 153 17 | 178 25 | 202 46 |
| 11      | 226 32 | 250 10 | 274 19 | 299 43 | 326 52 | 355 45 | 25 35  |
| 25      | 55 13  | 83 48  | 111 7  | 137 18 |        |        |        |
| April 1 | 150 3  | 175 00 | 199 18 | 223 7  | 246 43 | 270 32 | 295 10 |
| 15      | 321 17 | 349 15 | 18 53  | 49 14  | 79 2   | 107 25 | 134 13 |
| 29      | 169 42 |        |        |        |        |        |        |
| May 1   |        | 184 15 | 208 12 | 231 52 | 255 31 | 279 29 | 304 13 |
| 13      | 330 14 | 357 55 | 27 14  | 57 31  | 87 34  | 116 27 | 143 26 |
| 27      | 168 55 | 193 18 | 217 4  |        |        |        |        |
| June 1  |        |        |        |        |        |        | 228 52 |
| 3       | 257 32 | 276 33 | 301 13 | 326 47 | 353 33 | 21 41  | 51 2   |
| 17      | 80 57  | 110 25 | 138 32 | 164 57 | 189 52 | 213 49 | 237 26 |
| July 1  | 261 14 | 285 39 | 310 51 | 336 57 | 3 58   | 31 53  | 60 37  |
| 15      | 89 48  | 118 45 | 146 41 | 173 6  | 198 2  | 222 00 | 245 38 |
| 29      | 269 36 | 294 34 |        |        |        |        |        |
| Aug. 1  |        |        |        |        |        | 307 12 | 333 35 |
| 5       | 0 50   | 28 39  | 56 50  | 85 14  | 113 35 | 141 25 | 168 13 |
| 19      | 193 42 | 218 2  | 241 44 | 265 29 | 290 00 | 315 45 | 342 51 |
| Sep. 1  |        |        |        | 356 49 | 25 11  | 53 40  | 81 55  |
| 9       | 109 46 | 137 7  | 163 44 | 189 23 | 214 00 | 237 51 | 216 26 |
| 23      | 285 29 | 310 39 | 337 24 | 5 41   |        |        |        |
| Oct. 1  |        |        |        |        | 34 54  | 64 8   | 92 44  |
| 7       | 120 24 | 147 8  | 173 1  | 198 11 | 222 19 | 246 1  | 269 35 |
| 21      | 293 34 | 318 11 | 345 20 | 13 49  | 43 35  | 73 36  |        |
| Nov. 1  |        |        | 52 22  | 116 58 | 144 8  | 170 1  | 194 53 |
| 11      | 219 11 | 242 47 | 266 21 | 290 6  | 314 31 | 338 11 | 7 56   |
| 25      | 36 29  | 66 11  | 97 4   |        |        |        |        |
| Dec. 1  |        |        |        | 126 16 | 153 44 | 179 33 | 204 11 |
| 9       | 227 57 | 251 11 | 275 12 | 299 12 | 323 48 | 349 23 | 16 18  |
| 23      | 44 47  | 74 58  | 104 59 | 134 11 | 162 25 |        |        |

Ayanamsa: 21° 24' 20"

## Longitudes of Planets

|       | 1929 | Sun    | Mars   | Merc.   | Merc.   | Jupit. | Venus  | Saturn  | Rahu  |
|-------|------|--------|--------|---------|---------|--------|--------|---------|-------|
| Jan.  | 5    | 234 41 | 84 12R | 295 22  | 303 31  | 30 38  | 328 51 | 264 13  | 58 2  |
|       | 15   | 294 53 | 81 56  | 311 23  | 318 20  | 31 9   | 340 17 | 265 20  | 57 30 |
|       | 25   | 305 8  | 81 1D  | 323 9R  | 324 14R | 32 00  | 351 22 | 266 23  | 57 8  |
| Feb.  | 4    | 315 12 | 81 23  | 320 54  | 315 7   | 33 8   | 1 58   | 267 20  | 56 26 |
|       | 14   | 325 20 | 82 52  | 310 29  | 308 54  | 34 32  | 11 57  | 268 12  | 55 55 |
|       | 24   | 335 24 | 85 16  | 310 9D  | 313 29  | 36 8   | 21 1   | 268 57  | 55 23 |
| March | 6    | 345 26 | 88 24  | 318 16  | 324 4   | 37 56  | 28 47  | 269 34  | 54 51 |
|       | 16   | 355 25 | 92 7   | 330 38  | 337 51  | 39 53  | 34 39  | 270 2   | 54 19 |
|       | 26   | 5 21   | 96 17  | 345 39  | 354 1   | 41 58  | 37 47R | 270 21  | 53 48 |
| April | 5    | 15 31  | 100 49 | 2 58    | 12 30   | 44 9   | 37 13  | 270 30R | 53 16 |
|       | 15   | 25 2   | 105 38 | 22 38   | 33 10   | 46 25  | 32 49  | 270 11  | 52 44 |
|       | 25   | 34 47  | 110 41 | 43 25   | 53 48   | 48 44  | 26 40  | 270 19  | 52 12 |
| May   | 5    | 44 29  | 115 55 | 62 43   | 70 11   | 51 6   | 22 24  | 269 59  | 51 42 |
|       | 15   | 54 9   | 121 19 | 75 59   | 80 1    | 53 28  | 21 56D | 269 31  | 51 9  |
|       | 25   | 63 47  | 126 51 | 82 7    | 82 17R  | 55 50  | 25 1   | 268 11  | 50 37 |
| June  | 4    | 73 21  | 132 30 | 90 42   | 78 5    | 58 10  | 30 43  | 268 16  | 50 5  |
|       | 14   | 82 55  | 138 16 | 75 30   | 74 00   | 60 28  | 38 13  | 267 33  | 49 34 |
|       | 24   | 92 28  | 144 7  | 74 15D  | 76 29   | 62 41  | 46 54  | 266 40  | 49 1  |
| July  | 4    | 102 00 | 150 3  | 80 37   | 86 35   | 64 50  | 56 26  | 266 6   | 48 30 |
|       | 14   | 111 32 | 156 5  | 94 12   | 103 18  | 66 53  | 66 34  | 265 26  | 47 58 |
|       | 24   | 121 5  | 162 12 | 113 26  | 123 57  | 68 48  | 77 9   | 264 52  | 47 76 |
| Aug.  | 3    | 130 38 | 168 24 | 134 19  | 144 11  | 70 34  | 88 5   | 264 24  | 46 54 |
|       | 13   | 140 14 | 174 40 | 153 25  | 162 3   | 72 9   | 99 17  | 264 5   | 46 23 |
|       | 23   | 149 51 | 181 1  | 170 5   | 177 32  | 73 32  | 110 44 | 263 55  | 45 51 |
| Sep.  | 2    | 159 31 | 187 28 | 184 23  | 190 31  | 74 40  | 122 23 | 263 53D | 45 19 |
|       | 12   | 169 14 | 193 59 | 195 55  | 200 9   | 75 33  | 134 12 | 264 4   | 44 47 |
|       | 22   | 178 59 | 200 36 | 202 48R | 203 11R | 76 8   | 146 11 | 264 23  | 44 16 |
| Oct.  | 2    | 188 48 | 207 18 | 200 37  | 195 22  | 76 24R | 158 17 | 264 51  | 43 44 |
|       | 12   | 198 41 | 214 5  | 190 3   | 188 2D  | 76 19  | 170 31 | 265 28  | 43 12 |
|       | 22   | 208 36 | 220 57 | 190 25  | 195 59  | 75 55  | 182 50 | 266 12  | 42 40 |
| Nov.  | 1    | 218 35 | 227 55 | 203 13  | 211 7   | 75 12  | 195 14 | 267 3   | 42 9  |
|       | 11   | 228 37 | 234 59 | 219 12  | 227 16  | 74 12  | 207 42 | 268 1   | 41 37 |
|       | 21   | 238 42 | 242 7  | 235 15  | 243 10  | 72 59  | 220 12 | 269 3   | 41 5  |
| Dec.  | 1    | 248 50 | 249 21 | 251 1   | 258 51  | 71 39  | 232 44 | 270 9   | 40 33 |
|       | 11   | 258 59 | 256 40 | 266 42  | 274 33  | 70 18  | 245 18 | 271 18  | 40 2  |
|       | 21   | 269 9  | 264 4  | 282 23  | 290 6   | 69 2   | 257 52 | 272 29  | 39 30 |
|       | 31   | 279 21 | 271 33 | 297 25  | -       | 67 56  | 270 27 | 273 40  | 38 58 |

Ayanamasa: 21° 25' 10"

1929 A.D.

## RAMAN'S EPHEMERIS

77

## Longitude of the Moon

|       | 1929 | Sun.   | Tue.   | Thurs. | Sat.   | Mon.   | Wed.   | Fri.   |
|-------|------|--------|--------|--------|--------|--------|--------|--------|
| Jan.  | 1    |        | 175 37 | 200 48 | 224 51 | 248 25 | 272 4  | 296 9  |
|       | 13   | 320 53 | 346 21 | 12 40  | 40 3   | 68 37  | 98 8   | 127 49 |
|       | 27   | 156 35 | 183 40 | 209 00 |        |        |        |        |
| Feb.  | 1    |        |        |        |        |        |        | 221 10 |
|       | 3    | 244 55 | 268 31 | 292 33 | 317 14 | 343 8  | 9 39   | 36 50  |
|       | 17   | 64 40  | 93 8   | 120 00 | 150 36 | 178 11 | 204 17 |        |
| March | 1    |        |        |        |        |        |        | 228 59 |
|       | 3    | 252 49 | 276 28 | 300 39 | 325 50 | 352 11 | 19 32  | 47 28  |
|       | 17   | 75 39  | 103 53 | 132 00 | 159 41 | 186 30 | 212 11 | 236 46 |
|       | 31   | 260 37 |        |        |        |        |        |        |
| April | 1    |        |        |        |        | 272 27 | 296 19 | 321 1  |
|       | 7    | 347 2  | 14 29  | 43 00  | 71 56  | 100 41 | 128 48 | 156 8  |
|       | 21   | 182 35 | 208 8  | 232 49 | 256 11 | 280 29 |        |        |
| May   | 1    |        |        |        |        |        | 304 11 | 329 1  |
|       | 5    | 355 2  | 22 40  | 51 41  | 81 30  | 110 57 | 139 22 | 166 27 |
|       | 19   | 192 20 | 217 14 | 241 11 | 265 17 | 288 57 | 312 11 | 337 29 |
| June  | 1    |        |        |        | 289 13 | 16 52  | 45 15  | 75 5   |
|       | 9    | 105 11 | 135 11 | 161 1  | 189 20 | 214 20 | 238 29 | 262 14 |
|       | 23   | 285 55 | 309 47 | 331 7  | 359 16 |        |        |        |
| July  | 1    |        |        |        |        | 25 11  | 53 40  | 83 28  |
|       | 7    | 113 55 | 143 51 | 172 10 | 198 35 | 223 27 | 247 11 | 271 5  |
|       | 21   | 201 51 | 318 58 | 343 36 | 368 58 | 393 22 | 63 8   |        |
| Aug.  | 1    |        |        | 77 34  | 107 19 | 137 25 | 166 38 | 194 7  |
|       | 11   | 219 46 | 244 8  | 267 52 | 291 34 | 316 45 | 340 32 | 6 1    |
|       | 25   | 31 16  | 59 24  | 87 34  | 116 40 |        |        |        |
| Sep.  | 1    | 131 23 | 160 36 | 188 43 | 215 12 | 240 11 | 264 12 | 287 55 |
|       | 15   | 311 57 | 336 44 | 2 27   | 29 1   | 56 18  | 84 12  | 112 35 |
|       | 29   | 111 10 |        |        |        |        |        |        |
| Oct.  | 1    |        | 180 29 | 196 58 | 222 6  | 248 2  | 272 4  | 295 49 |
|       | 13   | 319 54 | 344 52 | 11 2   | 38 23  | 66 34  | 95 7   | 123 35 |
|       | 27   | 151 39 | 179 4  | 205 39 |        |        |        |        |
| Nov.  | 1    |        |        |        |        |        |        | 218 35 |
|       | 3    | 243 43 | 268 2  | 291 50 | 315 37 | 339 1  | 5 36   | 32 43  |
|       | 17   | 61 17  | 90 41  | 120 1  | 148 32 | 175 54 | 202 10 | 227 32 |
| Dec.  | 1    | 252 11 | 276 16 | 300 1  | 323 46 | 348 2  | 13 25  | 40 27  |
|       | 15   | 69 19  | 99 26  | 129 38 | 158 42 | 186 6  | 212 1  | 236 51 |
|       | 29   | 261 3  | 284 55 |        |        |        |        |        |

Ayanamsa: 21° 25' 10"



## Longitudes of Planets

| 1930  | Sun       | Mars.   | Merc.   | Merc.  | Jupit.  | Venus   | Saturn  | Rahu  |
|-------|-----------|---------|---------|--------|---------|---------|---------|-------|
| Jan.  | 5 284 27  | 275 11  | 303 40  | 307 39 | 67 28R  | 286 44  | 274 45  | 38 42 |
|       | 15 294 58 | 282 54  | 307 40R | 303 12 | 66 47   | 289 19  | 275 24  | 18 10 |
|       | 10 304 48 | 290 11  | 298 59  | 297 11 | 66 25   | 301 53  | 276 31  | 37 39 |
| Feb.  | 4 314 58  | 298 11  | 292 28D | 291 45 | 66 23D  | 314 26  | 277 35  | 37 7  |
|       | 14 325 5  | 306 00  | 298 51  | 304 15 | 66 41   | 326 59  | 278 11  | 11 35 |
|       | 24 335 10 | 313 48  | 310 27  | 317 17 | 67 19   | 339 30  | 279 26  | 36 8  |
| March | 11 345 12 | 321 38  | 324 11  | 332 10 | 68 15   | 351 59  | 280 11  | 35 31 |
|       | 16 355 11 | 329 15  | 340 51  | 349 43 | 69 25   | 1 27    | 280 59  | 35 00 |
|       | 26 5 11   | 337 5   | 359 5   | 8 58   | 70 51   | 14 52   | 281 20  | 34 28 |
| April | 5 14 59   | 345 4   | 19 5    | 29 20  | 72 29   | 29 15   | 281 40  | 33 56 |
|       | 15 24 47  | 352 51  | 39 22   | 47 54  | 74 11   | 41 34   | 281 51  | 33 24 |
|       | 11 14 33  | 0 36    | 54 42   | 59 29  | 76 12   | 53 51   | 281 52R | 32 53 |
| May   | 11 44 15  | 8 19    | 62 5    | 62 30R | 78 15   | 66 5    | 281 43  | 32 21 |
|       | 15 53 11  | 15 57   | 60 58R  | 58 17  | 80 24   | 78 16   | 281 25  | 31 49 |
|       | 11 63 11  | 11 52   | 55 15   | 53 59D | 82 37   | 11 23   | 280 59  | 31 17 |
| June  | 11 73 8   | 31 2    | 54 4    | 55 1   | 84 52   | 102 22  | 280 26  | 30 45 |
|       | 11 82 41  | 38 25   | 59 42   | 64 58  | 87 9    | 114 11  | 279 48  | 29 14 |
|       | 14 92 14  | 45 44   | 71 42   | 79 49  | 89 1    | 126 10  | 279 1   | 29 42 |
| July  | 11 101 46 | 52 55   | 89 10   | 99 29  | 91 44   | 138 7   | 278 20  | 29 10 |
|       | 14 111 18 | 59 59   | 110 13  | 120 19 | 93 59   | 149 47  | 277 36  | 28 39 |
|       | 14 120 51 | 66 55   | 130 54  | 130 18 | 96 12   | 161 19  | 276 56  | 27 7  |
| Aug.  | 3 130 25  | 73 43   | 149 00  | 157 1  | 98 20   | 172 41  | 276 20  | 26 35 |
|       | 13 140 00 | 80 22   | 164 11  | 170 57 | 100 23  | 183 50  | 275 51  | 25 11 |
|       | 23 149 37 | 86 51   | 176 43  | 181 33 | 102 19  | 194 43  | 275 30  | 24 11 |
| Sep.  | 2 159 17  | 93 9    | 185 2   | 186 43 | 104 7   | 205 15  | 275 18  | 23 00 |
|       | 12 168 59 | 99 14   | 186 1R  | 182 36 | 105 45  | 215 17  | 275 16D | 22 28 |
|       | 22 178 11 | 105 11  | 177 25  | 173 8  | 107 11  | 224 41  | 275 11  | 21 56 |
| Oct.  | 2 188 34  | 110 42  | 172 18D | 175 35 | 108 25  | 233 11  | 275 40  | 21 24 |
|       | 11 198 26 | 115 59  | 181 50  | 182 22 | 109 23  | 240 14  | 276 7   | 20 52 |
|       | 22 208 22 | 120 11  | 191 1   | 206 29 | 110 11  | 245 17  | 276 42  | 20 21 |
| Nov.  | 1 218 21  | 125 22  | 214 49  | 222 19 | 110 27  | 247 11R | 277 26  | 20 49 |
|       | 11 228 23 | 129 19  | 231 00  | 238 32 | 110 30R | 245 37  | 278 10  | 20 17 |
|       | 21 238 33 | 132 25  | 246 11  | 254 39 | 110 13  | 240 30  | 279 13  | 20 11 |
| Dec.  | 1 248 35  | 136 2   | 261 57  | 269 27 | 109 37  | 234 51  | 280 14  | 20 11 |
|       | 11 258 44 | 136 29  | 276 43  | 283 27 | 108 43  | 232 08D | 281 20  | 20 42 |
|       | 21 268 45 | 136 45R | 288 59  | 292 5  | 107 35  | 233 21  | 282 29  | 20 10 |
|       | 31 279 6  | 135 41  | 301 41  | —      | 106 18  | 237 55  | 283 39  | 19 38 |

Ayanamsa: 21° 26' 00"

## Longitude of the Moon

| 1930    | Sun    | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  |        |        |        |        |        | 296 48 | 320 32 |
| 5       | 344 29 | 9 7    | 34 11  | 62 11  | 92 9   | 122 48 | 153 11 |
| 19      | 181 11 | 208 42 | 233 54 | 258 8  | 281 56 | 305 30 | 329 31 |
| Feb. 1  |        |        |        | 341 11 | 1 58   | 31 10  | 57 39  |
| 9       | 11 11  | 115 34 | 146 3  | 175 53 | 203 59 | 230 10 | 254 54 |
| 23      | 278 48 | 302 30 | 326 23 |        |        |        |        |
| March 1 |        |        |        | 350 41 | 15 32  | 41 8   | 67 44  |
| 9       | 95 34  | 124 39 | 154 11 | 183 47 | 211 50 | 238 12 | 263 6  |
| 23      | 287 6  | 310 50 | 334 51 | 359 29 | 24 55  |        |        |
| April 1 |        | 37 58  | 64 41  | 92 13  | 120 30 | 149 17 | 178 11 |
| 13      | 206 8  | 233 11 | 261 37 | 283 11 | 308 57 | 330 48 | 355 14 |
| 27      | 20 39  | 47 11  |        |        |        |        |        |
| May 1   |        |        | 74 48  | 103 11 | 131 33 | 159 11 | 187 47 |
| 11      | 214 58 | 241 16 | 260 34 | 290 59 | 314 51 | 338 42 | 1 9    |
| 25      | 28 11  | 55 51  | 84 18  | 113 28 |        |        |        |
| June 1  | 128 11 | 156 11 | 184 32 | 211 22 | 237 22 | 262 36 | 287 8  |
| 15      | 311 7  | 334 51 | 358 51 | 23 46  | 50 12  | 78 11  | 108 11 |
| 29      | 138 1  |        |        |        |        |        |        |
| July 1  |        | 167 11 | 195 11 | 221 28 | 246 54 | 271 37 | 295 49 |
| 13      | 319 39 | 343 22 | 7 20   | 32 10  | 58 29  | 1 43   | 116 38 |
| 27      | 147 7  | 176 11 | 204 53 |        |        |        |        |
| Aug. 1  |        |        |        |        |        |        | 218 16 |
| 8       | 243 59 | 268 42 | 292 49 | 316 38 | 340 22 | 4 14   | 28 38  |
| 17      | 11 5   | 81 11  | 110 2  | 140 11 | 170 43 | 199 58 | 227 25 |
| 31      | 253 12 |        |        |        |        |        |        |
| Sep. 1  |        |        |        |        | 265 37 | 289 50 | 313 38 |
| 7       | 337 23 | 1 20   | 25 43  | 50 11  | 77 11  | 104 47 | 133 11 |
| 21      | 163 57 | 193 42 | 222 11 | 248 58 | 274 13 |        |        |
| Oct. 1  |        |        |        |        |        | 298 26 | 322 11 |
| 5       | 340 00 | 10 14  | 38 7   | 60 49  | 87 27  | 115 6  | 143 42 |
| 19      | 172 52 | 201 11 | 230 7  | 256 55 | 282 17 | 306 33 | 330 18 |
| Nov. 1  |        |        |        | 342 11 | 6 18   | 31 15  | 57 15  |
| 9       | 11 11  | 111 57 | 140 11 | 168 31 | 196 41 | 224 11 | 251 42 |
| 23      | 277 35 | 302 20 | 326 17 | 349 59 |        |        |        |
| Dec. 1  |        |        |        |        | 14 7   | 39 11  | 65 55  |
| 7       | 11 49  | 122 11 | 151 9  | 179 11 | 206 59 | 233 58 | 260 15 |
| 21      | 285 11 | 310 17 | 331 9  | 357 47 | 21 50  | 47 2   |        |

Ayanamsa: 21° 26' 00"

## Longitudes of Planets

| 1931  | Sun       | Mars.   | Merc.   | Merc.   | Jupit.  | Venus  | Saturn  | Rahu  |
|-------|-----------|---------|---------|---------|---------|--------|---------|-------|
| Jan.  | 5 284 12  | 134 38R | 288 1R  | 279 27R | 105 38R | 241 8  | 284 15  | 19 24 |
|       | 15 294 23 | 131 39  | 276 15R | 276 47D | 104 17  | 248 54 | 285 27  | 18 52 |
|       | 25 304 34 | 127 49  | 280 00  | 284 49  | 103 3   | 257 59 | 286 36  | 18 21 |
| Feb.  | ■ 314 43  | 123 53  | 290 41  | 297 13  | 102 00  | 267 55 | 287 43  | 17 49 |
|       | 14 324 50 | 120 33  | 304 16  | 311 45  | 101 ■   | 278 27 | 288 47  | 17 17 |
|       | 24 334 55 | 118 22  | 319 37  | 327 55  | 100 39  | 289 25 | 289 48  | 16 45 |
| March | 6 344 57  | 117 27  | 336 38  | 345 48  | 100 27  | 300 44 | 290 40  | 16 13 |
|       | 16 354 57 | 117 48D | 355 26  | 5 24    | 100 34D | 312 10 | 291 25  | 15 42 |
|       | 26 4 53   | 119 14  | 15 25   | 24 51   | 101 00  | 323 48 | 292 7   | 15 10 |
| April | ■ 14 45   | 121 35  | 32 54   | 38 54   | 101 47  | 335 33 | 292 39  | 14 37 |
|       | 15 24 34  | 124 39  | 42 26   | 43 22R  | 102 47  | 347 24 | 293 1   | 14 6  |
|       | 25 34 19  | 128 18  | 41 57R  | 39 8R   | 104 00  | 359 18 | 293 13  | 13 35 |
| May   | 5 44 1    | 132 25  | 36 00R  | 33 57R  | 105 30  | 11 16  | 293 16R | 13 3  |
|       | 15 53 41  | 136 54  | 33 44D  | 35 23   | 107 10  | 23 16  | 293 10  | 12 31 |
|       | 25 63 20  | 141 43  | 38 41   | 43 36   | 108 57  | 35 17  | 292 54  | 11 59 |
| June  | 4 72 54   | 146 47  | 49 44   | 57 5    | 110 53  | 47 21  | 292 27  | 11 27 |
|       | 14 82 29  | 152 5   | 65 34   | 75 6    | 112 54  | 59 26  | 291 56  | 10 ■  |
|       | 24 92 02  | 157 34  | 85 32   | 96 24   | 115 00  | 71 34  | 291 21  | 10 24 |
| July  | ■ 101 33  | 163 14  | 107 10  | 117 25  | 117 10  | 83 44  | 290 39R | 9 51  |
|       | 14 111 ■  | 169 3   | 126 55  | 135 38  | 119 22  | 95 ■   | 289 02  | 9 20  |
|       | 24 120 37 | 175 1   | 143 34  | 150 42  | 121 35  | 108 10 | 289 10  | 8 48  |
| Aug.  | ■ 130 11  | 181 6   | 157 00  | 162 19  | 123 49  | 120 27 | 288 27  | 8 17  |
|       | 13 139 47 | 187 20  | 166 ■   | 169 00  | 126 1   | 132 46 | 287 52  | 7 45  |
|       | 23 149 24 | 193 42  | 169 37R | 167 50R | 128 11  | 145 ■  | 287 21  | 7 13  |
| Sep.  | 2 169 4   | 200 11  | 163 56R | 159 12R | 130 ■   | 157 31 | 286 57R | 6 41  |
|       | 12 168 46 | 206 46  | 156 11R | 156 40D | 132 19  | 169 57 | 286 44  | 6 ■   |
|       | 22 178 31 | 213 27  | 160 49  | 167 42  | 134 14  | 182 ■  | 286 39  | 5 37  |
| Oct.  | 2 188 20  | 220 17  | 176 2   | 184 53  | 136 2   | 194 51 | 286 44D | 5 ■   |
|       | 12 198 12 | 227 13  | 193 42  | 202 19  | 137 41  | 207 19 | 286 59  | 4 ■   |
|       | 22 ■ 8    | 234 16  | 210 42  | 218 49  | 139 ■   | 219 48 | 287 24  | 4 1   |
| Nov.  | ■ 218 6   | 241 26  | 226 43  | 234 ■   | 140 23  | 232 17 | 287 59  | 3 30  |
|       | 11 228 8  | 248 41  | 241 59  | 249 22  | 141 22  | 244 46 | 288 41  | 3 00  |
|       | 21 238 13 | 256 ■   | 256 32  | 263 20  | 142 6   | 257 15 | 289 30  | 2 25  |
| Dec.  | 1 248 20  | 263 30  | 269 27  | 274 13  | 142 31  | 269 44 | 290 27  | 1 55  |
|       | 11 258 29 | 271 ■   | 276 22  | 274 23R | 142 38R | 282 12 | 291 28  | 1 24  |
|       | 21 268 39 | 278 40  | ■ 24R   | ■ 23R   | 142 26  | 294 38 | 292 33  | 0 52  |
|       | 31 278 51 | ■ 22    | 260 7R  | 261 40D | 141 54  | 307 3  | 293 40  | 0 19  |

Ayanamasa: 21° 26' 51"

1931 A.D.

## RAMAN'S EPHEMERIS

83

## Longitude of the Moon

| 1931    | Sun.   | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  |        |        | 60 14  | 88 00  | 117 12 | 146 52 | 175 58 |
| 11      | 203 56 | 230 48 | 256 46 | 281 59 | 306 33 | 330 32 | 354 9  |
| 25      | 17 51  | 42 16  | 68 6   | 95 51  |        |        |        |
| Feb. 1  | 110 26 | 140 32 | 170 47 | 199 59 | 227 11 | 253 51 | 278 59 |
| 15      | 303 24 | 327 20 | 350 59 | 14 37  | 38 38  | 63 36  | 90 7   |
| March 1 | 118 31 | 148 30 | 179 2  | 208 11 | 236 53 | 263 17 | 288 19 |
| 15      | 312 28 | 336 11 | 359 48 | 23 37  | 47 55  | 73 4   | 99 29  |
| 29      | 127 27 | 156 52 |        |        |        |        |        |
| April 1 |        |        |        |        |        | 171 55 | 202 3  |
| 11      | 231 16 | 258 51 | 284 43 | 309 15 | 333 3  | 356 39 | 20 30  |
| 19      | 44 55  | 70 7   | 96 14  | 123 25 | 151 42 | 180 52 |        |
| May 1   |        |        |        |        |        |        | 210 21 |
| 3       |        |        |        |        |        | 4 58   | 29 2   |
| 17      | 239 16 | 266 53 | 292 54 | 317 31 | 341 20 | 190 49 | 219 27 |
| 31      | 53 55  | 79 48  | 106 37 | 134 10 | 162 18 |        |        |
| June 1  | 247 41 |        |        |        |        |        |        |
| 7       |        |        |        |        | 261 28 | 288 4  | 313 18 |
| 21      | 337 27 | 1 7    | 24 59  | 49 42  | 75 38  | 102 48 | 130 48 |
| July 1  | 159 8  | 187 25 | 215 29 | 243 11 | 270 14 |        |        |
| 5       |        |        |        |        |        | 296 19 | 321 19 |
| 19      | 345 23 | 9 1    | 32 55  | 57 45  | 84 2   | 111 51 | 140 41 |
| Aug. 1  | 169 44 | 198 20 | 226 11 | 253 6  | 279 34 | 305 1  | 329 37 |
| 9       |        |        |        | 341 38 | 5 19   | 28 58  | 53 13  |
| 23      | 78 46  | 106 1  | 134 54 | 164 40 | 194 15 | 222 52 | 250 15 |
| Sep. 1  | 276 28 | 301 45 | 326 15 | 350 10 | 13 47  |        |        |
| 13      |        | 25 34  | 49 27  | 74 13  | 100 27 | 128 29 | 158 6  |
| 27      | 188 23 | 218 9  | 246 34 | 273 23 | 298 49 | 323 16 | 347 7  |
| Oct. 1  | 10 44  | 34 24  |        |        |        |        |        |
| 11      |        |        | 58 27  | 83 17  | 109 21 | 137 1  | 166 18 |
| 25      | 196 33 | 226 40 | 255 31 | 282 34 | 307 58 | 332 13 | 355 54 |
| Nov. 1  | 19 30  | 43 23  | 67 48  | 92 57  |        |        |        |
| 15      |        |        |        |        |        |        |        |
| 29      | 105 53 | 132 35 | 160 35 | 189 50 | 219 47 | 249 21 | 277 32 |
| Dec. 1  | 303 55 | 328 43 | 352 34 | 16 8   | 40 1   | 64 34  | 89 55  |
| 13      | 116 4  |        |        |        |        |        |        |
| 27      |        |        |        |        |        |        |        |
| 1       |        | 142 59 | 170 43 | 199 17 | 228 25 | 257 25 | 285 24 |
| 13      | 311 49 | 336 42 | 0 35   | 24 11  | 48 12  | 73 7   | 99 8   |
| 27      | 126 5  | 153 39 | 181 35 |        |        |        |        |

Ayanamsa: 21° 26' 51"

# RAMAN'S EPHEMERIS Longitudes of Planets

1932 A.D.

| 1932  | Sun       | Mars   | Merc.   | Merc.   | Jupit.  | Venus   | Saturn  | Rahu   |
|-------|-----------|--------|---------|---------|---------|---------|---------|--------|
| Jan.  | 5 283 56  | 290 24 | 221 40  | 265 42  | 141 30R | 313 15  | 294 17  | 0 5    |
| 15    | 294 19    | 298 02 | 271 9   | 277 27  | 140 32  | 325 35  | 295 28  | 359 32 |
| 25    | 304 19    | 305 52 | 283 57  | 291 31  | 139 22  | 337 53  | 296 40  | 359 1  |
| Feb.  | 5 314 11  | 313 14 | 299 4   | 306 57  | 138 1   | 349 11  | 297 50  | 358 29 |
| 14    | 324 36    | 321 38 | 314 55  | 323 43  | 136 44  | 2 10    | 298 57  | 357 57 |
| 24    | 334 41    | 329 31 | 331 40  | 342 00  | 135 30  | 14 6    | 300 3   | 357 25 |
| March | 5 344 43  | 337 25 | 351 37  | 1 15    | 134 23  | 25 51   | 331 00  | 356 54 |
| 15    | 354 42    | 345 18 | 10 15   | 17 47   | 133 31  | 37 22   | 301 58  | 356 22 |
| 25    | 36 38     | 353 09 | 22 52   | 25 28   | 132 55  | 48 5    | 302 47  | 355 50 |
| April | 4 14 31   | 0 57   | 24 7R   | 21 51R  | 132 37  | 59 28   | 303 29  | 355 18 |
| 14    | 24 20     | 8 41   | 17 21R  | 14 37R  | 132 39D | 69 50   | 304 02  | 354 46 |
| 24    | 34 6      | 16 33  | 11 44D  | 14 37   | 133 00  | 79 37   | 304 25  | 354 14 |
| May   | 4 43 48   | 24 00  | 17 57   | 22 27   | 133 37  | 88 27   | 304 40  | 353 43 |
| 14    | 53 29     | 31 32  | 23 19   | 24 56   | 134 31  | 96 4    | 304 45  | 353 11 |
| 24    | 63 8      | 39 00  | 42 43   | 51 27   | 135 40  | 101 54  | 304 41R | 352 39 |
| June  | 3 72 41   | 46 21  | 51 6    | 71 34   | 137 00  | 105 8   | 304 27R | 352 7  |
| 13    | 82 15     | 53 38  | 82 30   | 83 32   | 138 33  | 104 46R | 304 3   | 351 36 |
| 23    | 91 47     | 60 48  | 103 43  | 113 16  | 140 14  | 100 39R | 304 33  | 351 4  |
| July  | 3 101 20  | 67 52  | 121 56  | 129 32  | 142 3   | 94 35R  | 302 56  | 350 32 |
| 13    | 110 52    | 74 50  | 136 33  | 142 24  | 144 00  | 89 59   | 302 15  | 350 1  |
| 23    | 120 25    | 81 42  | 147 1   | 150 19  | 146 1   | 89 00D  | 301 31  | 349 29 |
| Aug.  | 2 129 58  | 88 27  | 151 50  | 151 11R | 148 6   | 91 45   | 300 46  | 348 51 |
| 12    | 139 33    | 95 5   | 148 34R | 143 41R | 150 15  | 97 0    | 299 1   | 348 25 |
| 22    | 149 10    | 101 37 | 140 47  | 139 16D | 152 23  | 104 27  | 299 11  | 347 54 |
| Sep.  | 1 158 50  | 108 00 | 141 3R  | 146 1   | 154 36  | 113 5   | 298 54  | 347 22 |
| 11    | 168 12    | 114 17 | 153 32  | 162 21  | 156 46  | 122 30  | 298 29  | 346 50 |
| 21    | 178 17    | 120 25 | 171 37  | 180 50  | 158 54  | 132 53  | 297 13  | 346 18 |
| Oct.  | 1 188 6   | 126 5  | 189 41  | 198 23  | 160 59  | 143 1   | 298 7   | 345 40 |
| 11    | 198 58    | 132 12 | 206 33  | 214 20  | 163 00  | 154 48  | 297 10D | 345 15 |
| 21    | 208 11    | 137 48 | 222 9   | 231 11  | 164 16  | 166 17  | 296 24  | 344 43 |
| 31    | 217 52    | 143 12 | 238 44  | 243 34  | 166 41  | 178 1   | 296 48  | 344 11 |
| Nov.  | 10 227 54 | 148 20 | 249 53  | 255 22  | 168 19  | 189 58  | 299 20  | 343 39 |
| 20    | 237 58    | 153 9  | 259 11  | 260 31R | 169 46  | 201 3   | 300 1   | 343 8  |
| 30    | 248 5     | 157 35 | 267 36R | 251 15R | 171 00  | 214 17  | 300 50  | 342 36 |
| Dec.  | 10 258 14 | 161 33 | 275 45R | 244 25D | 172 00  | 226 16  | 301 45  | 341 11 |
| 20    | 268 11    | 164 58 | 246 55  | 251 43  | 172 43  | 238 59  | 302 46  | 341 32 |
| 30    | 278 35    | 167 40 | 257 45  | 264 27  | 173 8   | 251 16  | 303 53  | 341 00 |

Ayanamsa : 21° 27' 41"

## Longitude of the Moon

|       | 1932 | Sun.   | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|-------|------|--------|--------|--------|--------|--------|--------|--------|
| Jan.  | 1    |        |        |        |        |        |        | 195 39 |
|       | 3    | 223 55 | 252 11 | 279 58 | 306 43 | 332 10 | 356 28 | 20 8   |
|       | 17   | 43 53  | 68 24  | 94 11  | 121 21 | 149 32 | 178 8  | 206 38 |
|       | 31   | 234 43 |        |        |        |        |        |        |
| Feb.  | 1    |        |        |        |        | 248 35 | 275 49 | 302 17 |
|       | 7    | 327 47 | 352 21 | 16 12  | 39 49  | 63 50  | 88 54  | 115 31 |
|       | 21   | 143 43 | 173 00 | 202 30 | 231 23 | 259 14 |        |        |
| March | 1    |        | 272 44 | 298 56 | 324 12 | 348 41 | 12 36  | 36 14  |
|       | 13   | 59 59  | 84 23  | 110 00 | 137 19 | 166 19 | 196 25 | 222 28 |
|       | 27   | 255 27 | 282 51 | 308 45 |        |        |        |        |
| April | 1    |        |        |        |        |        |        | 321 15 |
|       | 3    | 345 37 | 9 57   | 33 5   | 56 47  | 81 54  | 105 48 | 132 00 |
|       | 17   | 159 52 | 189 22 | 219 50 | 249 57 | 278 37 | 305 13 | 330 35 |
| May   | 1    | 354 40 | 18 19  | 41 57  | 65 51  | 90 13  | 115 19 | 141 26 |
|       | 15   | 168 57 | 198 00 | 228 8  | 258 15 | 287 7  | 314 5  | 339 19 |
|       | 29   | 3 24   | 27 1   |        |        |        |        |        |
| June  | 1    |        |        |        |        |        | 38 50  | 62 45  |
|       | 5    | 87 14  | 112 24 | 138 19 | 165 10 | 193 9  | 222 14 | 251 54 |
|       | 19   | 281 8  | 308 59 | 335 4  | 359 43 | 23 32  | 47 13  |        |
| July  | 1    |        |        |        |        |        |        | 71 21  |
|       | 3    | 96 15  | 122 1  | 148 34 | 175 51 | 203 49 | 232 25 | 261 16 |
|       | 17   | 289 44 | 317 5  | 343 1  | 7 39   | 31 32  | 55 17  | 79 33  |
|       | 31   | 104 47 |        |        |        |        |        |        |
| Aug.  | 1    |        |        |        |        | 117 50 | 144 43 | 172 26 |
|       | 7    | 200 39 | 229 3  | 257 21 | 285 15 | 312 22 | 338 27 | 3 26   |
|       | 21   | 27 33  | 51 18  | 75 15  | 100 1  | 126 4  | 153 31 |        |
| Sep   | 1    |        |        | 167 42 | 196 36 | 225 38 | 254 11 | 281 54 |
|       | 11   | 308 40 | 334 30 | 359 29 | 23 44  | 47 33  | 71 17  | 95 31  |
|       | 25   | 120 48 | 147 37 | 176 7  |        |        |        |        |
| Oct.  | 1    |        |        |        | 205 48 | 233 40 | 264 42 | 292 21 |
|       | 9    | 318 38 | 343 50 | 8 18   | 32 17  | 56 2   | 79 47  | 103 57 |
|       | 23   | 129 4  | 155 40 | 184 6  | 214 7  | 244 38 |        |        |
| Nov.  | 1    |        | 259 39 | 288 20 | 315 29 | 340 55 | 5 20   | 29 14  |
|       | 13   | 52 58  | 76 45  | 100 48 | 125 24 | 151 1  | 178 10 | 207 7  |
|       | 27   | 237 28 | 267 57 |        |        |        |        |        |
| Dec.  | 1    |        |        | 297 12 | 324 29 | 349 59 | 14 17  | 38 3   |
|       | 11   | 61 46  | 85 44  | 110 6  | 135 2  | 160 46 | 187 42 | 216 7  |
|       | 25   | 245 49 | 275 55 | 305 8  | 332 38 |        |        |        |

Ayanamsa: 21° 27' 41"

# RAMAN'S EPHEMERIS Longitudes of Planets

1933 A.D.

| 1933  | Sun      | Mars    | Merc.   | Merc.   | Jupit.  | Venus  | Saturn  | Rahu   |
|-------|----------|---------|---------|---------|---------|--------|---------|--------|
| Jan.  | ■ 284 43 | 168 52  | 265 50  | 273 ■   | 173 15  | 258 53 | 304 33  | 340 42 |
| 15    | 294 54   | 170 6   | 280 27  | 288 8   | 173 11R | 271 23 | 305 43  | 340 10 |
| ■     | 305 ■    | 170 10R | 296 ■   | 304 14  | 172 47  | 283 51 | 306 54  | 339 38 |
| Feb.  | ■ 315 14 | 168 55  | 312 42  | 321 28  | 172 6R  | 296 21 | 308 6   | 339 ■  |
| 14    | 325 22   | 166 25  | 330 2   | 339 48  | 171 8   | 308 50 | 309 16  | 338 35 |
| 24    | 335 26   | 162 56  | 348 55  | 357 12  | 170 00  | 321 19 | 310 26  | 337 59 |
| March | 6 345 29 | 159 00R | 3 36    | 7 3     | 168 43  | 337 47 | 311 28  | 337 31 |
| 11    | 355 27   | 155 21  | ■ 56R   | ■ 50R   | 167 24  | 346 14 | 312 32  | 336 58 |
| ■     | ■ 23     | 152 37  | 359 30  | 356 2R  | 166 10  | 358 40 | 313 ■   | 336 26 |
| April | ■ 15 16  | 151 7R  | 354 40  | 355 32D | 165 ■   | 11 5   | 314 17  | 335 56 |
| 15    | 25 4     | 150 55D | 358 20  | 2 39    | 164 13  | 22 58  | 315 00  | 335 24 |
| 25    | 34 50    | 151 54  | ■ 10    | 14 42   | 163 38  | 35 50  | 315 35  | 334 52 |
| May   | 5 44 33  | 153 53  | 22 5    | 29 50   | 163 20  | 48 9   | 315 59  | 334 20 |
| 15    | ■ 12     | 156 41  | 38 53   | 48 45   | 163 19D | 60 29  | 316 16  | 333 48 |
| ■     | ■ 10     | 160 9   | ■ 18    | 70 15   | 163 38  | 72 46  | 316 23  | 333 16 |
| June  | ■ 73 25  | 164 11  | 81 35   | 91 48   | 164 13  | 85 2   | 316 20R | 332 45 |
| 14    | 82 58    | 168 38  | 101 ■   | 111 26  | 165 4   | 97 18  | 316 7   | 332 13 |
| ■     | 92 31    | 173 30  | 116 42  | 122 53  | 166 8   | 109 31 | 315 46  | 331 42 |
| July  | ■ 102 3  | 178 42  | 127 48  | 131 19  | 167 28  | 121 45 | 315 17R | 331 10 |
| 14    | 111 35   | 184 ■   | 133 8   | 133 00R | 168 57  | 133 57 | 314 40  | 331 33 |
| ■     | 121 8    | 189 53  | 130 57  | 127 32  | 170 36  | 146 7  | 313 57  | 330 ■  |
| Aug.  | 3 130 42 | 195 47  | 124 6   | 122 11  | 172 24  | 158 14 | 313 15  | 329 34 |
| 13    | 140 17   | 201 55  | 122 53  | 126 35  | 174 18  | 170 19 | 312 31  | 329 2  |
| 23    | 149 54   | 208 13  | 132 49  | 141 7   | 176 17  | 182 24 | 311 47  | 328 37 |
| Sep.  | 2 159 34 | 214 42  | 150 32  | 160 13  | 178 21  | 194 22 | 311 7   | 327 55 |
| 12    | 169 16   | 221 20  | 169 43  | 178 51  | 180 28  | 206 18 | 310 36  | 327 27 |
| 22    | 180 ■    | 228 ■   | 187 32  | 195 49  | 182 37  | 218 9  | 310 10  | 326 55 |
| Oct.  | 2 ■ 51   | 235 ■   | 203 45  | 211 19  | 184 48  | 229 ■  | 309 52  | 326 21 |
| 12    | 198 43   | 242 9   | 218 31  | 225 22  | 187 00  | 241 32 | 309 44  | 325 52 |
| 22    | 208 ■    | 249 22  | 231 43  | 237 23  | 189 6   | 253 00 | 309 48D | 325 20 |
| Nov.  | 1 218 37 | 256 40  | 241 54  | 244 31  | 191 9   | 264 17 | 309 58  | 324 48 |
| 11    | 228 39   | 264 7   | 243 59R | 239 29R | 193 9   | 275 18 | 310 21  | 324 17 |
| 21    | 238 ■    | 271 39  | 232 57  | 228 43  | 195 00  | 285 54 | 310 ■   | 323 45 |
| Dec.  | 1 248 51 | 279 11  | 229 29  | 233 23  | 196 43  | 295 57 | 311 33  | 323 13 |
| 11    | 259 00   | 287 1   | ■ 10    | 245 53  | 198 25  | 305 12 | 312 21  | 322 41 |
| 21    | ■ 11     | 294 48  | 253 3   | 260 28  | 199 50  | 313 12 | 313 16  | 322 ■  |
| ■     | 279 22   | 302 38  | 268 ■   | 275 46  | 201 3   | 319 31 | 314 17  | 321 37 |

Ayanamsa: 21° 28' 31"



## Longitude of the Moon

| 1933    | Sun.   | Tue.   | Thurs. | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  | 345 41 | 10 39  | 34 39  | 58 21  | 82 17  | 106 45 | 131 55 |
| 15      | 157 48 | 24 29  | 212 6  | 240 39 | 269 49 | 298 50 | 326 52 |
| 29      | 353 25 | 18 31  |        |        |        |        |        |
| Feb. 1  |        |        |        |        |        | 30 40  | 54 31  |
| 5       | 78 20  | 102 39 | 127 50 | 154 2  | 181 9  | 208 58 | 237 13 |
| 19      | 265 38 | 293 54 | 321 34 | 348 17 | 13 52  |        |        |
| March 1 |        |        |        |        |        | 38 26  | 62 20  |
| 5       | 86 11  | 110 23 | 135 51 | 162 36 | 190 36 | 219 21 | 248 12 |
| 19      | 276 34 | 304 11 | 330 57 | 356 54 | 22 2   | 46 25  | 70 17  |
| April 1 |        |        |        | 82 9   | 106 5  | 130 49 | 158 56 |
| 9       | 184 45 | 214 11 | 243 48 | 273 4  | 301 7  | 327 53 | 353 35 |
| 23      | 18 31  | 42 52  | 66 48  | 90 31  |        |        |        |
| May 1   |        |        |        |        | 114 24 | 139 00 | 165 00 |
| 7       | 192 50 | 222 26 | 252 53 | 282 47 | 311 10 | 337 52 | 3 15   |
| 21      | 27 46  | 51 48  | 75 35  | 99 18  | 123 15 | 147 51 |        |
| June 1  |        |        | 160 35 | 187 16 | 215 51 | 246 2  | 276 37 |
| 11      | 306 13 | 334 2  | 0 5    | 24 51  | 48 53  | 72 39  | 96 23  |
| 25      | 120 22 | 144 48 | 170 6  |        |        |        |        |
| July 1  |        |        |        | 196 42 | 214 57 | 254 41 | 284 59 |
| 9       | 314 35 | 342 36 | 8 49   | 33 39  | 57 39  | 81 23  | 105 14 |
| 23      | 129 31 | 154 25 | 180 49 | 206 56 | 234 57 |        |        |
| Aug. 1  |        | 249 23 | 278 50 | 308 19 | 336 55 | 4 2    | 29 37  |
| 13      | 54 2   | 77 52  | 101 40 | 125 11 | 151 00 | 176 58 | 203 52 |
| 27      | 231 35 | 259 56 | 288 38 |        |        |        |        |
| Sep. 1  |        |        |        |        |        |        | 302 59 |
| 3       | 331 19 | 358 45 | 24 56  | 49 53  | 73 58  | 97 43  | 121 46 |
| 17      | 146 41 | 172 48 | 200 6  | 228 15 | 256 44 | 285 6  | 313 6  |
| Oct. 1  | 340 32 | 7 14   | 33 1   | 57 49  | 81 51  | 105 33 | 129 34 |
| 15      | 154 34 | 181 4  | 209 8  | 238 14 | 267 27 | 296 1  | 323 38 |
| 29      | 350 22 | 16 19  |        |        |        |        |        |
| Nov. 1  |        |        |        |        |        | 29 1   | 53 53  |
| 5       | 78 4   | 101 47 | 125 29 | 149 11 | 175 26 | 202 55 | 232 9  |
| 19      | 262 15 | 291 57 | 320 23 | 347 23 | 13 13  | 38 14  |        |
| Dec. 1  |        |        |        |        |        |        | 62 39  |
| 3       | 86 36  | 110 15 | 133 56 | 157 11 | 183 39 | 210 55 | 240 7  |
| 17      | 270 33 | 300 51 | 329 51 | 357 7  | 11 52  | 47 33  | 71 37  |
| 31      | 95 22  |        |        |        |        |        |        |

Ayanamsa : 21° 28' 31"

# RAMAN'S EPHEMERIS Longitudes of Planets

1934 A.D.

| 1934  | Sun       | Mars   | Merc.   | Merc.   | Jupit.  | Venus   | Saturn  | Rahu   |
|-------|-----------|--------|---------|---------|---------|---------|---------|--------|
| Jan.  | 5 284 28  | 308 24 | 275 15  | 283 39  | 201 33  | 321 44  | 314 53  | 321 21 |
|       | 15 294 39 | 314 26 | 291 14  | 300 1   | 202 23  | 323 28  | 316 00  | 320 50 |
|       | 25 304 50 | 322 21 | 307 22  | 317 16  | 202 56  | 321 33R | 317 9   | 320 18 |
| Feb.  | 4 314 59  | 330 16 | 326 6   | 334 43  | 203 11  | 316 7R  | 318 22  | 319 45 |
|       | 14 325 7  | 338 10 | 342 28  | 348 8   | 203 44R | 310 30  | 319 34  | 319 15 |
|       | 24 335 12 | 346 02 | 350 55  | 349 45R | 202 44  | 308 00  | 320 43  | 318 44 |
| March | 6 345 14  | 353 52 | 344 14R | 339 32R | 202 3   | 309 24  | 321 54  | 318 11 |
|       | 16 355 13 | 2 26   | 336 45R | 336 33D | 201 7   | 314 2   | 323 1   | 317 40 |
|       | 26 3 9    | 9 23   | 338 37  | 342 24  | 200 00  | 320 53  | 324 1   | 317 1  |
| April | 5 15 1    | 17 2   | 347 28  | 353 11  | 198 44  | 329 12  | 325 2   | 316 2  |
|       | 15 24 50  | 24 37  | 0 29    | 8 8     | 197 28  | 338 33  | 326 21  | 316 1  |
|       | 25 34 35  | 32 7   | 16 39   | 25 40   | 196 13R | 348 33  | 326 28  | 315 30 |
| May   | 5 44 19   | 39 33  | 35 25   | 45 49   | 195 9   | 359 4   | 327 14  | 315 00 |
|       | 15 53 59  | 46 54  | 56 46   | 67 33   | 194 16  | 9 56    | 327 42  | 314 22 |
|       | 25 63 36  | 54 9   | 77 42   | 88 54   | 193 40  | 21 1    | 328 1   | 313 56 |
| June  | 4 73 11   | 61 18  | 88 54   | 101 41  | 193 20R | 32 22   | 328 10  | 313 24 |
|       | 14 82 45  | 68 22  | 107 8   | 111 9   | 193 18  | 43 51   | 329 9R  | 312 54 |
|       | 24 92 18  | 75 21  | 113 28  | 113 58R | 193 34  | 55 27   | 327 59R | 312 22 |
| July  | 4 101 50  | 82 14  | 112 32R | 109 53R | 194 6   | 67 10   | 327 40R | 311 52 |
|       | 14 111 12 | 89 1   | 108 40R | 104 30R | 194 50  | 79 00   | 327 12R | 311 18 |
|       | 24 120 55 | 96 47  | 104 20D | 100 35  | 196 00  | 90 53   | 326 36  | 310 45 |
| Aug.  | 3 130 28  | 102 52 | 111 18  | 117 46  | 197 16  | 102 52  | 325 56R | 310 15 |
|       | 13 140 8  | 109 00 | 126 59  | 136 44  | 198 44  | 114 57  | 325 12  | 309 41 |
|       | 23 149 11 | 115 28 | 146 49  | 156 36  | 200 23  | 126 6   | 324 27D | 309 11 |
| Sep.  | 2 159 20  | 121 52 | 166 1   | 174 55  | 202 5   | 139 21  | 323 47R | 308 36 |
|       | 12 169 2  | 128 11 | 183 20  | 191 17  | 204 3   | 151 40  | 323 2   | 308 7  |
|       | 22 178 45 | 134 20 | 198 47  | 205 50  | 206 6   | 164 3   | 322 28  | 307 35 |
| Oct.  | 2 188 36  | 140 33 | 212 20  | 218 22  | 208 9   | 176 28  | 322 00R | 307 00 |
|       | 12 198 29 | 146 36 | 223 28  | 227 13  | 210 14  | 188 57  | 321 41  | 306 30 |
|       | 22 208 24 | 152 32 | 228 52  | 227 20R | 212 26  | 201 27  | 321 31  | 305 59 |
| Nov.  | 1 218 23  | 158 21 | 222 18  | 216 36  | 214 37  | 214 00  | 321 31  | 305 29 |
|       | 11 228 25 | 164 3  | 213 3   | 214 11D | 216 48  | 226 32  | 321 42  | 304 57 |
|       | 21 238 35 | 169 34 | 219 12  | 225 38  | 218 56  | 239 1   | 321 4D  | 304 25 |
| Dec.  | 1 248 36  | 174 55 | 232 49  | 240 20  | 221 2   | 251 40  | 322 35  | 303 51 |
|       | 11 258 46 | 180 3  | 248 00  | 255 43  | 223 6   | 265 50  | 323 15  | 303 20 |
|       | 21 268 56 | 184 56 | 263 21  | 271 24  | 224 58  | 276 59  | 324 1   | 302 50 |
|       | 31 279 5  | 189 29 | 279 22  | 287 28  | 226 46  | 289 24  | 324 57  | 302 18 |

Ayanamsa: 21° 29' 22"

1934 A.D.

## RAMAN'S EPHEMERIS

80

Longitude of the Moon

|       | 1934 | Sun.   | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|-------|------|--------|--------|--------|--------|--------|--------|--------|
| Jan.  | 1    |        |        |        |        | 107 12 | 139 55 | 154 50 |
|       | 7    | 170 49 | 205 57 | 233 45 | 263 19 | 293 43 | 323 44 | 352 19 |
|       | 21   | 19 6   | 44 20  | 74 22  | 92 16  | 115 56 | 139 53 |        |
| Feb.  | 1    |        |        | 152 2  | 176 51 | 202 33 | 229 28 | 257 39 |
|       | 11   | 59 59  | 316 5  | 346 3  | 13 56  | 40 2   | 68 56  | 95 50  |
|       | 25   | 112 28 | 136 23 |        |        |        |        |        |
| March | 1    |        |        | 160 5  | 186 26 | 212 43 | 240 1  | 268 1  |
|       | 11   | 296 53 | 325 32 | 354 9  | 21 46  | 48 00  | 72 53  | 95 49  |
|       | 25   | 120 53 | 144 31 | 169 53 | 195 36 |        |        |        |
| April | 1    | 209 6  | 236 44 | 264 51 | 293 7  | 321 18 | 349 15 | 16 40  |
|       | 15   | 43 9   | 68 29  | 92 46  | 116 5  | 140 15 | 164 48 | 190 41 |
|       | 29   | 218 2  |        |        |        |        |        |        |
| May   | 1    |        | 246 35 | 275 29 | 304 5  | 332 3  | 359 21 | 25 22  |
|       | 13   | 51 47  | 76 43  | 100 49 | 124 28 | 148 12 | 172 2  | 198 44 |
|       | 27   | 226 53 | 255 39 | 285 22 |        |        |        |        |
| June  | 1    |        |        |        |        |        |        | 300 3  |
|       | 3    | 328 46 | 356 20 | 22 50  | 48 25  | 73 14  | 97 22  | 121 2  |
|       | 17   | 144 38 | 168 40 | 193 48 | 220 36 | 249 14 | 279 11 | 309 21 |
| July  | 1    | 338 37 | 6 22   | 32 48  | 57 59  | 82 20  | 106 10 | 129 45 |
|       | 15   | 153 25 | 177 33 | 202 40 | 229 18 | 257 40 | 287 31 | 317 53 |
|       | 29   | 347 36 | 15 47  |        |        |        |        |        |
| Aug.  | 1    |        |        |        |        |        | 29 13  | 54 55  |
|       | 8    | 79 25  | 103 14 | 126 49 | 150 30 | 174 37 | 199 27 | 225 19 |
|       | 19   | 252 33 | 281 15 | 311 5  | 341 9  | 10 21  | 37 54  | 63 42  |
| Sep.  | 1    |        |        |        | 76 1   | 100 5  | 123 40 | 147 22 |
|       | 9    | 171 35 | 196 31 | 222 17 | 248 22 | 276 41 | 305 23 | 334 47 |
|       | 23   | 2 6    | 32 22  | 59 22  | 86 18  |        |        |        |
| Oct.  | 1    |        |        |        |        | 108 19 | 131 55 | 155 46 |
|       | 7    | 180 21 | 205 54 | 232 23 | 259 22 | 287 53 | 315 53 | 344 13 |
|       | 21   | 12 45  | 40 33  | 67 4   | 92 10  | 116 12 | 139 49 |        |
| Nov.  | 1    |        |        | 151 41 | 176 1  | 201 28 | 228 13 | 255 57 |
|       | 11   | 284 10 | 312 26 | 340 33 | 2 25   | 35 46  | 62 17  | 87 43  |
|       | 25   | 112 6  | 135 40 | 159 28 |        |        |        |        |
| Dec.  | 1    |        |        |        | 183 45 | 209 24 | 236 34 | 265 4  |
|       | 8    | 294 12 | 323 19 | 351 22 | 18 22  | 45 20  | 71 10  | 96 3   |
|       | 22   | 120 11 | 143 51 | 167 30 | 191 44 | 217 13 |        |        |

Ayanamsa: 21° 29' 22"

## Longitudes of Planets

|       | 1935 | Sun    | Mars    | Merc.   | Merc.   | Jupit.  | Venus   | Saturn  | Rahu   |
|-------|------|--------|---------|---------|---------|---------|---------|---------|--------|
| Jan.  | 5    | 284 13 | 191 37  | 287 53  | 205 44  | 227 11  | 295 41  | 325 27  | 302 1  |
|       | 15   | 294 25 | 195 34  | 304 6   | 310 50  | 229 1   | 308 13  | 326 30  | 301 30 |
|       | 25   | 304 25 | 198 28  | 321 36  | 327 42  | 230 29  | 320 44  | 327 34  | 300 57 |
| Feb.  | 5    | 314 45 | 201 43  | 332 36  | 333 50R | 231 34  | 333 14  | 328 47  | 300 26 |
|       | 14   | 324 52 | 203 11  | 330 36R | 325 9R  | 232 28  | 345 42  | 330 00  | 299 55 |
|       | 24   | 334 57 | 204 34  | 320 36  | 318 50R | 233 00  | 358 7   | 331 12  | 299 23 |
| March | 6    | 345 00 | 204 22R | 320 17D | 322 51  | 233 16  | 10 28   | 332 25  | 298 50 |
|       | 16   | 354 59 | 202 46  | 327 24  | 333 2   | 233 14R | 22 45   | 333 36  | 298 18 |
|       | 26   | 1 54   | 200 2   | 339 32  | 346 43  | 232 53  | 34 11   | 334 40  | 297 48 |
| April | 5    | 14 47  | 196 28R | 354 12  | 2 58    | 232 14R | 47 3    | 335 47  | 297 17 |
|       | 15   | 24 55  | 192 40R | 12 2    | 21 45   | 230 20R | 5 2     | 336 47  | 296 44 |
|       | 25   | 34 22  | 189 21  | 32 3    | 42 46   | 230 13  | 70 52   | 337 40  | 296 12 |
| May   | 5    | 44 05  | 187 5   | 52 25   | 63 29   | 229 00  | 82 11   | 338 27  | 295 40 |
|       | 15   | 53 45  | 186 5R  | 72 24   | 79 57   | 227 44  | 94 6    | 339 6   | 295 9  |
|       | 25   | 63 22  | 186 25D | 86 2    | 90 31   | 226 34  | 105 20  | 339 36  | 294 36 |
| June  | 4    | 72 58  | 187 54  | 93 14   | 94 5    | 225 24R | 116 11  | 340 00  | 294 5  |
|       | 14   | 82 31  | 190 23  | 93 5R   | 90 43R  | 224 30R | 127 6   | 340 11  | 293 33 |
|       | 24   | 92 1   | 193 42  | 87 53R  | 85 47R  | 223 52R | 137 20  | 340 13R | 293 1  |
| July  | 4    | 101 36 | 197 41  | 85 18D  | 86 51   | 223 31  | 146 57R | 340 6R  | 292 29 |
|       | 14   | 111 8  | 202 13  | 90 33R  | 94 13   | 222 26D | 155 43  | 339 48R | 292 00 |
|       | 24   | 120 41 | 207 13  | 103 45  | 112 52  | 223 40  | 163 16  | 339 22R | 291 25 |
| Aug.  | 4    | 130 14 | 212 37  | 122 56  | 133 18  | 224 12  | 169 6   | 338 40R | 290 55 |
|       | 13   | 139 49 | 218 22  | 143 28  | 153 6   | 225 00  | 172 11  | 338 9   | 290 23 |
|       | 23   | 149 26 | 224 25  | 162 11  | 170 40  | 226 00  | 172 11R | 337 27  | 289 50 |
| Sep.  | 2    | 159 6  | 230 45  | 178 38  | 181 1   | 227 18  | 168 45  | 336 40R | 289 17 |
|       | 12   | 168 48 | 237 18  | 192 57  | 199 11  | 228 47  | 162 15R | 335 54  | 288 48 |
|       | 22   | 178 22 | 244 2   | 204 41  | 209 9   | 230 1   | 157 11  | 335 13  | 288 16 |
| Oct.  | 2    | 188 22 | 251 00  | 212 4   | 212 47R | 231 14  | 156 43D | 334 37R | 287 45 |
|       | 12   | 198 14 | 258 7   | 210 12R | 204 47R | 231 11  | 159 33  | 334 7R  | 287 12 |
|       | 22   | 207 59 | 265 23  | 199 17R | 197 16  | 236 13  | 165 9   | 333 45R | 286 40 |
| Nov.  | 1    | 218 1  | 272 46  | 199 38  | 205 6   | 238 20  | 172 45  | 333 33R | 286 8  |
|       | 11   | 228 10 | 280 17  | 212 1   | 219 48  | 240 31  | 181 42  | 333 31D | 285 42 |
|       | 21   | 238 15 | 287 54  | 227 41  | 235 35  | 242 44  | 191 36  | 333 40  | 285 1  |
| Dec.  | 1    | 248 22 | 295 36  | 238 28  | 251 20  | 244 58  | 202 10  | 334 00  | 284 32 |
|       | 11   | 258 31 | 303 21  | 259 11  | 267 04  | 247 12  | 213 15  | 334 28  | 284 1  |
|       | 21   | 268 41 | 311 9   | 275 00  | 283 00  | 249 23  | 224 40  | 335 4   | 283 30 |
|       | 31   | 278 53 | 318 58  | 291 3   | 299 00  | 251 32  | 236 21  | 335 53  | 283 58 |

Ayanamsa: 21° 30' 12"

## Longitude of the Moon

| 1935    | Sun    | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  |        | 230 35 | 258 38 | 288 ■  | 318 4  | 347 28 | 15 39  |
| 13      | 42 27  | 68 2   | 92 44  | 116 48 | 140 30 | 164 7  | 188 2  |
| 27      | 212 45 | 238 47 | 266 32 |        |        |        |        |
| Feb. 1  |        |        |        |        |        |        | 281 4  |
| 3       | 311 6  | 341 30 | 11 1   | 38 52  | 65 00  | 80 48  | 113 47 |
| 17      | 137 26 | 161 5  | 185 00 | 209 27 | 234 46 | 261 20 |        |
| March 1 |        |        |        |        |        |        | 289 29 |
| 3       | 319 ■  | 349 30 | 19 21  | 47 36  | 73 56  | 98 42  | 122 34 |
| 17      | 146 8  | 169 54 | 194 9  | 219 2  | 244 39 | 271 14 | 299 00 |
| 31      | 328 00 |        |        |        |        |        |        |
| April 1 |        |        |        |        | 342 51 | 12 42  | 41 45  |
| 7       | 69 10  | 94 47  | 119 4  | 142 44 | 166 26 | 190 41 | 215 44 |
| 21      | 241 35 | 268 11 | 295 32 | 323 39 | 352 28 |        |        |
| May 1   |        |        |        |        |        | 21 30  | 49 58  |
| 5       | 77 6   | 102 42 | 127 3  | 150 46 | 174 34 | 199 2  | 224 31 |
| 19      | 251 3  | 278 26 | 306 21 | 334 36 | 2 58   | 31 11  | 58 46  |
| June 1  |        |        |        | 72 11  | 98 7   | 122 53 | 146 50 |
| 9       | 170 32 | 194 40 | 219 47 | 246 12 | 273 54 | 302 26 | 331 14 |
| 23      | 359 48 | 27 46  | 54 57  | 81 13  |        |        |        |
| July 1  |        |        |        |        | 106 33 | 131 00 | 154 52 |
| 7       | 178 34 | 202 41 | 227 47 | 254 20 | 282 27 | 311 46 | 341 24 |
| 21      | 10 25  | 38 24  | 65 5   | 90 40  | 115 24 | 139 32 |        |
| Aug. 1  |        |        | 151 26 | 175 6  | 198 56 | 223 23 | 240 2  |
| 11      | 276 19 | 305 20 | 335 30 | 5 39   | 34 39  | 61 59  | 87 46  |
| 25      | 112 26 | 136 28 | 160 12 | 183 53 |        |        |        |
| Sep. 1  | 195 48 | 219 ■  | 244 51 | 271 3  | 298 57 | 328 35 | 359 9  |
| 15      | 29 17  | 57 50  | 84 26  | 109 23 | 133 33 | 157 14 | 180 57 |
| 29      | 204 55 |        |        |        |        |        |        |
| Oct. 1  |        | 229 18 | 254 22 | 280 28 | 308 00 | 337 0  | 7 23   |
| 13      | 37 31  | 68 15  | 93 4   | 118 10 | 142 14 | 165 54 | 189 42 |
| 27      | 213 57 | 238 48 | 264 18 |        |        |        |        |
| Nov. 1  |        |        |        |        |        |        | 277 21 |
| 3       | 304 11 | 332 11 | 1 17   | 30 56  | 60 5   | 87 48  | 113 49 |
| 17      | 138 26 | 162 17 | 186 1  | 210 12 | 235 9  | 260 57 | 287 34 |
| Dec. 1  | 314 53 | 342 53 | 11 25  | 40 7   | 68 23  | 95 37  | 121 31 |
| 15      | 146 12 | 170 ■  | 193 54 | 218 9  | 243 21 | 269 45 | 297 14 |
| 29      | 325 26 | 353 55 |        |        |        |        |        |

Ayanamsa: 21° 30' 12"

# RAMAN'S EPHEMERIS Longitudes of Planets

1936 A.D.

| 1936  | Sun       | Mars   | Mer.    | Mer.    | Jupit.  | Venus  | Saturn  | Rahu   |
|-------|-----------|--------|---------|---------|---------|--------|---------|--------|
| Jan.  | 5 283 59  | 322 53 | 298 59  | 306 31  | 252 35  | 242 16 | 336 20  | 282 42 |
|       | 15 294 10 | 330 44 | 312 58  | 317 00  | 254 37  | 254 12 | 337 18  | 282 9  |
|       | 25 304 21 | 338 33 | 317 00R | 312 49R | 256 31  | 266 12 | 338 21  | 281 37 |
| Feb.  | 4 314 31  | 346 21 | 306 37R | 302 44R | 258 17  | 278 23 | 339 28  | 281 5  |
|       | 14 324 38 | 354 6  | 302 00D | 304 3   | 259 52  | 290 37 | 340 34  | 280 34 |
|       | 24 334 43 | 1 47   | 307 58  | 313 8   | 261 17  | 302 51 | 341 51  | 280 2  |
| March | 5 344 45  | 9 26   | 319 13  | 325 58  | 262 27  | 315 ■  | 343 00  | 279 31 |
|       | 15 354 44 | 16 59  | 333 20  | 341 15  | 263 22  | 327 24 | 344 18  | 279 00 |
|       | 25 4 41   | 24 30  | 349 40  | 358 41  | 264 00  | 339 41 | 345 30  | 278 28 |
| April | 4 14 33   | 31 56  | 8 12    | 18 18   | 264 22  | 351 59 | 346 39  | 277 54 |
|       | 14 24 22  | 39 16  | 28 48   | 39 14   | 264 25R | 4 16   | 347 43  | 277 30 |
|       | 24 34 8   | 46 31  | 49 ■    | 57 38   | 264 9R  | 16 33  | 348 46  | 276 52 |
| May   | 3 42 53   | 53 00  | 63 20   | 68 52   | 263 38R | 27 36  | 349 36  | 276 22 |
|       | 13 52 33  | 60 5   | 72 25   | 74 00   | 262 50R | 39 52  | 350 27  | 275 50 |
|       | 23 62 11  | 67 1   | 73 32R  | 71 00R  | 261 48R | 51 38  | 351 10  | 275 26 |
| June  | 3 72 44   | 74 43  | 69 14R  | 66 8R   | 260 32  | 66 32  | 351 45  | 274 45 |
|       | 13 82 17  | 81 35  | 65 32D  | 66 47   | 259 12R | 77 54  | 352 12  | 274 12 |
|       | 23 91 50  | 88 23  | 69 55   | 74 48   | 258 1R  | 90 31  | 352 28  | 273 47 |
| July  | ■ 101 22  | 95 5   | 81 19   | 89 21   | 256 51R | 102 28 | 352 32  | 273 10 |
|       | 13 110 54 | 101 44 | 98 45   | 109 4   | 255 51R | 114 47 | 352 27R | 272 37 |
|       | 23 120 27 | 108 21 | 119 41  | 130 6   | 255 9   | 127 5  | 352 13  | 272 12 |
| Aug.  | 2 130 00  | 114 53 | 139 58  | 149 11  | 254 42R | 130 25 | 351 40R | 271 34 |
|       | 12 139 35 | 121 22 | 157 46  | 165 43  | 254 34D | 151 44 | 351 16  | 271 2  |
|       | 22 149 12 | 127 47 | 173 2   | 179 42  | 254 45D | 164 4  | 350 37R | 270 30 |
| Sep.  | 1 158 52  | 134 10 | 185 35  | 190 34  | 255 15  | 176 24 | 349 55  | 270 00 |
|       | 11 168 34 | 140 30 | 194 19  | 196 18  | 256 ■   | 188 44 | 349 10  | 269 27 |
|       | 21 178 19 | 146 48 | 195 41R | 191 30R | 257 ■   | 201 3  | 348 23  | 268 55 |
| Oct.  | 1 188 ■   | 153 2  | 187 5R  | 182 30R | 258 20  | 213 21 | 347 40R | 268 22 |
|       | 11 197 59 | 159 14 | 181 36D | 184 52  | 259 49  | 225 ■  | 347 ■   | 267 54 |
|       | 21 207 55 | 165 23 | 191 7   | 193 38  | 261 30  | 237 54 | 346 30  | 267 20 |
|       | 31 217 53 | 171 29 | 206 17  | 215 1   | 263 15  | 250 9  | 345 6   | 266 49 |
| Nov.  | 10 227 55 | 177 32 | 223 10  | 231 13  | ■ 10    | 262 22 | 345 52  | 266 17 |
|       | 20 236 00 | 183 31 | ■ 10    | 247 ■   | 267 ■   | 274 32 | 345 47D | 265 45 |
|       | 30 248 7  | ■ 25   | 254 ■   | 262 35  | 269 35  | 286 ■  | 345 53  | 265 13 |
| Dec.  | 10 258 ■  | 195 13 | 270 20  | 278 2   | 271 50  | 298 40 | 346 10  | 264 40 |
|       | 20 ■ 27   | 200 ■  | 285 31  | ■ 29    | 274 7   | 310 35 | 346 37  | 264 10 |
|       | ■ 278 38  | 206 30 | 298 11  | 301 30  | 276 25  | 322 19 | 347 15  | 263 37 |

Ayanamsa : 21° 31' 2"

|       | 1936 | Sun.   | Tue.   | Thurs. | Sat.   | Mon.   | Wed.   | Fri.   |
|-------|------|--------|--------|--------|--------|--------|--------|--------|
| Jan.  | 1    |        |        |        |        |        | 8 8    | 30 19  |
|       | 5    | 63 57  | 90 50  | 116 48 | 141 49 | 166 1  | 189 48 | 213 42 |
|       | 19   | 238 19 | 264 14 | 291 42 | 320 29 | 349 52 | 18 57  | 47 0   |
| Feb.  | 1    |        |        |        | 60 46  | 87 18  | 112 58 | 137 53 |
|       | 9    | 162 11 | 186 4  | 209 48 | 233 53 | 258 56 | 285 33 | 313 59 |
|       | 23   | 343 52 | 14 4   | 43 21  | 71 4   |        |        |        |
| March | 1    | 84 20  | 109 57 | 134 41 | 158 53 | 182 46 | 206 30 | 230 23 |
|       | 15   | 254 48 | 280 22 | 307 39 | 336 54 | 7 20   | 37 45  | 66 46  |
|       | 29   | 63 55  | 119 27 |        |        |        |        |        |
| April | 1    |        |        |        |        |        | 131 47 | 155 56 |
|       | 5    | 179 45 | 203 30 | 227 24 | 251 40 | 276 40 | 302 54 | 330 49 |
|       | 19   | 0 25   | 30 53  | 60 51  | 89 13  | 115 43 | 140 43 |        |
| May   | 1    |        |        |        |        |        |        | 164 48 |
|       | 3    | 188 33 | 212 21 | 236 30 | 261 8  | 286 31 | 312 55 | 340 38 |
|       | 17   | 9 40   | 39 28  | 69 07  | 97 19  | 123 57 | 149 5  | 173 14 |
|       | 31   | 197 00 |        |        |        |        |        |        |
| June  | 1    |        |        |        |        | 208 55 | 233 3  | 257 49 |
|       | 7    | 283 24 | 309 52 | 337 15 | 5 20   | 34 21  | 63 18  | 91 40  |
|       | 21   | 118 51 | 144 39 | 169 17 | 193 13 | 217 2  |        |        |
| July  | 1    |        |        |        |        |        | 241 18 | 266 28 |
|       | 5    | 292 44 | 320 2  | 348 5  | 16 30  | 44 56  | 73 2   | 100 32 |
|       | 19   | 127 7  | 152 40 | 177 14 | 201 9  | 224 57 | 249 15 | 274 39 |
| Aug.  | 1    |        |        |        | 287 53 | 315 25 | 344 4  | 13 5   |
|       | 9    | 41 45  | 69 41  | 96 46  | 123 4  | 148 34 | 173 17 | 197 21 |
|       | 23   | 221 3  | 244 57 | 269 41 | 295 55 | 323 54 |        |        |
| Sep.  | 1    |        | 338 29 | 8 17   | 37 54  | 66 29  | 93 45  | 119 53 |
|       | 13   | 145 10 | 169 48 | 193 54 | 217 37 | 241 17 | 265 26 | 290 43 |
|       | 27   | 317 45 | 346 44 |        |        |        |        |        |
| Oct.  | 1    |        |        | 17 2   | 47 19  | 76 24  | 103 47 | 129 43 |
|       | 11   | 154 36 | 178 50 | 202 42 | 226 22 | 250 6  | 274 16 | 299 28 |
|       | 25   | 326 15 | 354 57 | 25 10  | 55 43  |        |        |        |
| Nov.  | 1    | 70 40  | 99 21  | 126 13 | 151 33 | 175 53 | 199 42 | 223 22 |
|       | 15   | 247 11 | 271 21 | 296 12 | 322 8  | 349 32 | 18 31  | 48 33  |
|       | 29   | 78 35  |        |        |        |        |        |        |
| Dec.  | 1    |        | 107 29 | 134 40 | 160 12 | 184 32 | 208 18 | 231 59 |
|       | 13   | 256 1  | 280 39 | 306 3  | 332 23 | 359 45 | 28 8   | 57 18  |
|       | 27   | 86 37  | 115 13 | 142 29 |        |        |        |        |

Āyanamsa : 21° 31' 2"



## Longitudes of Planets

|       | 1937 | Sun    | Mars    | Merc.   | Merc.   | Jupit.  | Venus  | Saturn  | Rahu   |
|-------|------|--------|---------|---------|---------|---------|--------|---------|--------|
| Jan.  | 5    | 284 45 | 209 47  | 301 30  | 299 28R | 277 48  | 329 16 | 347 40  | 263 19 |
|       | 15   | 294 56 | 215 8   | 293 39R | 287 6R  | 280 3   | 340 38 | 348 31  | 262 48 |
|       | 25   | 305 7  | 220 17  | 285 31  | 286 29D | 282 19  | 351 36 | 349 28  | 262 14 |
| Feb.  | 4    | 315 16 | 225 12  | 289 51  | 294 44  | 284 30  | 2 5    | 350 30  | 261 42 |
|       | 14   | 325 24 | 229 47  | 300 37  | 307 10  | 286 37  | 11 54  | 351 38  | 261 12 |
|       | 24   | 335 29 | 234 2   | 314 16  | 321 50  | 288 35  | 20 44  | 352 48  | 260 40 |
| March | 6    | 345 31 | 237 49  | 329 52  | 338 20  | 290 26  | 28 7   | 354 00  | 260 8  |
|       | 16   | 355 30 | 241 00  | 347 18  | 356 46  | 292 8   | 33 50  | 355 16  | 259 36 |
|       | 26   | 5 25   | 243 28  | 6 42    | 16 54   | 293 37  | 35 47  | 356 30  | 259 8  |
| April | 5    | 15 18  | 245 2   | 27 00   | 36 17   | 294 54  | 34 16R | 357 43  | 258 33 |
|       | 15   | 25 17  | 245 32  | 44 1    | 49 49   | 295 55  | 20 10R | 358 54  | 258 0  |
|       | 25   | 34 51  | 244 47R | 53 18   | 54 50   | 296 41  | 23 12R | 0 2     | 257 29 |
| May   | 5    | 44 35  | 242 49  | 53 22R  | 50 50R  | 297 11  | 19 44  | 1 5     | 256 57 |
|       | 15   | 54 15  | 239 49  | 47 54R  | 45 49   | 297 18R | 20 10D | 2 2     | 256 25 |
|       | 25   | 63 52  | 236 20  | 45 19D  | 46 20   | 297 10  | 23 27  | 2 54    | 255 54 |
| June  | 4    | 73 27  | 233 5   | 49 55   | 54 37   | 296 42  | 30 10  | 3 39    | 255 22 |
|       | 14   | 83 1   | 230 32  | 60 46   | 68 12   | 295 56  | 36 58  | 11 15   | 254 50 |
|       | 24   | 92 33  | 229 35  | 76 53   | 86 40   | 294 57  | 46 54  | 4 41    | 254 18 |
| July  | 11   | 102 6  | 229 37  | 97 16   | 108 5   | 293 46R | 56 36  | 5 0     | 253 48 |
|       | 14   | 111 38 | 231 26  | 118 36  | 128 32  | 292 30  | 66 51  | 5 7     | 253 15 |
|       | 24   | 121 10 | 234 6   | 137 45  | 146 12  | 291 14  | 77 30  | 5 6R    | 252 44 |
| Aug.  | 3    | 130 44 | 237 44  | 153 58  | 160 59  | 290 8R  | 88 00  | 4 53R   | 252 12 |
|       | 13   | 140 19 | 242 6   | 167 12  | 172 30  | 289 00  | 99 46  | 4 32R   | 251 40 |
|       | 23   | 149 56 | 247 5   | 176 33  | 179 11  | 288 12  | 111 15 | 4 0     | 251 8  |
| Sep.  | 2    | 159 36 | 252 36  | 179 34R | 177 31R | 287 41R | 122 56 | 3 24R   | 250 35 |
|       | 12   | 169 19 | 258 32  | 173 4R  | 168 15  | 287 30  | 134 47 | 2 41R   | 250 5  |
|       | 22   | 179 11 | 264 50  | 165 28  | 166 35D | 287 35D | 146 47 | 1 54R   | 249 32 |
| Oct.  | 2    | 188 53 | 271 25  | 171 22  | 178 32  | 288 1   | 158 53 | 1 8R    | 249 0  |
|       | 12   | 198 45 | 278 15  | 186 50  | 195 20  | 288 45  | 171 8  | 0 23R   | 248 30 |
|       | 22   | 208 40 | 285 17  | 204 1   | 212 25  | 289 47  | 183 28 | 359 43R | 247 57 |
| Nov.  | 1    | 218 39 | 292 29  | 220 35  | 228 36  | 291 3   | 195 52 | 359 11  | 247 26 |
|       | 11   | 228 41 | 299 48  | 236 31  | 244 8   | 292 32  | 208 20 | 358 45  | 246 54 |
|       | 21   | 238 46 | 307 13  | 251 43  | 259 13  | 294 14  | 220 52 | 358 27  | 246 23 |
| Dec.  | 11   | 248 53 | 314 42  | 266 29  | 273 24  | 296 7   | 233 24 | 358 21  | 245 50 |
|       | 11   | 259 2  | 322 15  | 279 33  | 284 5   | 298 6   | 245 58 | 358 25D | 245 19 |
|       | 21   | 269 13 | 329 48  | 285 32R | 282 28  | 300 17  | 258 33 | 358 42  | 244 40 |
|       | 31   | 279 24 | 337 23  | 278 8R  | 270 50  | 302 31  | 271 11 | 359 8   | 244 14 |

Ayanamsa: 21° 31' 53"

## Longitude of the Moon

| 1937    | Sun.   | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  |        |        |        |        |        |        | 155 31 |
| 3       | 180 33 | 204 35 | 228 15 | 252 10 | 276 50 | 302 30 | 329 10 |
| 17      | 356 38 | 24 38  | 52 58  | 81 22  | 109 32 | 136 58 | 163 16 |
| 31      | 188 19 |        |        |        |        |        |        |
| Feb. 1  |        |        |        |        | 200 27 | 224 14 | 247 57 |
| 7       | 272 17 | 297 49 | 324 43 | 352 40 | 21 19  | 49 48  | 77 51  |
| 21      | 105 24 | 132 22 | 158 37 | 183 55 |        |        |        |
| March 1 |        |        |        |        | 208 19 | 232 4  | 255 45 |
| 7       | 280 4  | 305 42 | 333 1  | 1 50   | 31 17  | 60 25  | 88 36  |
| 21      | 115 47 | 142 5  | 167 37 | 192 25 | 216 33 | 240 14 |        |
| April 1 |        |        | 252 1  | 275 54 | 300 43 | 327 9  | 355 26 |
| 11      | 25 11  | 55 18  | 84 37  | 112 34 | 139 8  | 164 36 | 180 15 |
| 25      | 213 19 | 237 1  | 260 37 |        |        |        |        |
| May 1   |        |        |        | 284 34 | 309 22 | 335 39 | 3 44   |
| 9       | 33 27  | 63 50  | 93 40  | 122 2  | 148 45 | 234 4  | 198 24 |
| 23      | 222 12 | 245 49 | 269 33 | 293 44 | 318 43 |        |        |
| June 1  |        | 331 39 | 358 38 | 27 11  | 57 00  | 87 11  | 116 35 |
| 13      | 144 25 | 170 31 | 195 15 | 219 8  | 242 45 | 266 31 | 290 47 |
| 27      | 315 46 | 341 40 |        |        |        |        |        |
| July 1  |        |        | 8 39   | 36 48  | 65 59  | 95 37  | 124 48 |
| 11      | 152 41 | 178 54 | 203 40 | 227 32 | 251 10 | 275 7  | 299 50 |
| 25      | 325 27 | 351 58 | 19 17  | 47 16  |        |        |        |
| Aug. 1  | 61 30  | 90 16  | 119 3  | 147 12 | 174 4  | 199 29 | 223 43 |
| 15      | 247 23 | 271 12 | 295 45 | 321 28 | 345 19 | 16 1   | 44 7   |
| 29      | 72 20  | 100 32 |        |        |        |        |        |
| Sep. 1  |        |        |        |        |        | 114 33 | 142 17 |
| 8       | 169 13 | 195 00 | 219 38 | 243 27 | 267 6  | 291 16 | 316 36 |
| 19      | 343 25 | 11 32  | 40 20  | 69 5   | 97 22  | 123 00 |        |
| Oct. 1  |        |        |        |        |        |        | 151 57 |
| 8       | 178 7  | 203 22 | 227 43 | 251 27 | 275 3  | 299 10 | 324 30 |
| 17      | 351 29 | 20 6   | 49 41  | 79 14  | 107 58 | 135 32 | 161 59 |
| 31      | 187 27 |        |        |        |        |        |        |
| Nov. 1  |        |        |        |        | 199 53 | 224 13 | 248 00 |
| 7       | 271 33 | 295 19 | 319 52 | 345 48 | 13 31  | 42 54  | 73 10  |
| 21      | 103 8  | 131 49 | 158 53 | 184 31 | 209 7  |        |        |
| Dec. 1  |        |        |        |        |        | 223 3  | 256 41 |
| 8       | 280 17 | 304 11 | 328 46 | 354 30 | 21 49  | 50 49  | 81 4   |
| 19      | 111 26 | 140 40 | 168 6  | 193 46 | 218 9  | 241 53 | 265 26 |

Ayanamsa: 21° 31' 53"

# RAMAN'S EPHEMERIS Longitudes of Planets

1938 A.D.

| 1938  | Sun       | Mars.  | Merc.   | Merc.   | Jupit.  | Venus   | Saturn | Rahu   |
|-------|-----------|--------|---------|---------|---------|---------|--------|--------|
| Jan.  | 5 284 30  | 341 10 | 270 50R | 269 24D | 303 40  | 277 27  | 359 24 | 244 00 |
|       | 15 294 41 | 348 43 | 271 23  | 275 33  | 306 00  | 290 1   | 0 2    | 243 28 |
|       | 25 304 52 | 356 11 | 281 2   | 287 19  | 308 21  | 302 34  | 0 54   | 242 55 |
| Feb.  | ■ 315 1   | 3 42   | 294 8   | 301 27  | 310 44  | 315 7   | 1 49   | 242 24 |
|       | 14 325 9  | 11 7   | 309 2   | 317 2   | 313 5   | 327 39  | 2 51   | 241 52 |
|       | 24 335 14 | 11 ■   | 325 26  | 334 14  | 315 25  | 340 10  | 3 57   | 241 20 |
| March | 6 345 16  | 25 47  | 342 57  | 353 5   | 317 42  | 352 39  | 5 8    | 240 49 |
|       | 16 355 15 | 33 00  | 2 59    | 12 42   | 319 54  | 5 ■     | 6 22   | 240 17 |
|       | 26 5 11   | 40 10  | 21 15   | 28 55   | 322 00  | 17 32   | 7 36   | 239 44 |
| April | 5 15 3    | 47 15  | 33 31   | 35 32   | 324 00  | 29 55   | 8 52   | 239 14 |
|       | 15 24 52  | 54 15  | 34 49R  | 32 7R   | 325 48  | 42 14   | 10 ■   | 238 42 |
|       | 25 34 38  | 61 12  | 28 43R  | 26 6R   | 327 28  | 54 1    | 11 19  | 238 9  |
| May   | 5 44 21   | 68 4   | 25 11   | 26 14D  | 328 54  | 66 44   | 12 28  | 237 39 |
|       | 15 54 1   | 74 52  | 29 4    | 33 25   | 330 ■   | 78 54   | 13 34  | 237 7  |
|       | 25 63 38  | 81 37  | 39 5    | 45 54   | 331 6   | 91 1    | 14 34  | 236 34 |
| June  | 4 73 13   | 88 18  | 53 48   | 62 46   | 331 45  | 103 ■   | 15 26  | 236 3  |
|       | 14 82 47  | 94 56  | 72 40   | 83 20   | 332 9   | 115 ■   | 16 16  | 235 31 |
|       | 24 92 20  | 101 31 | 94 17   | 104 57  | 332 14  | 126 53  | 16 56  | 235 00 |
| July  | 4 101 52  | 108 3  | 115 0   | 124 16  | 331 58R | 138 34  | 17 27  | 234 27 |
|       | 14 111 24 | 114 33 | 132 41  | 140 17  | 331 24  | 150 18  | 17 48  | 233 55 |
|       | 24 120 59 | 121 1  | 147 2   | 152 49  | 330 35  | 161 48  | 18 1   | 233 23 |
| Aug.  | 3 130 30  | 127 27 | 157 29  | 169 45  | 329 30R | 173 7   | 18 2R  | 232 51 |
|       | 13 140 ■  | 133 51 | 162 16  | 161 35R | 328 16  | 184 12  | 17 54R | 232 20 |
|       | 23 140 42 | 140 15 | 158 41  | 154 16  | 328 58  | 195 00  | 17 36  | 231 48 |
| Sep.  | 2 159 22  | 146 36 | 150 22R | 149 2   | 325 41R | 205 24  | 17 8R  | 231 10 |
|       | 12 169 13 | 152 57 | 151 17  | 156 49  | 324 30R | 215 17  | 16 32R | 230 43 |
|       | 22 178 50 | 159 18 | 164 32  | 173 20  | 323 32R | 224 29  | 15 50  | 230 13 |
| Oct.  | 2 188 38  | 165 37 | 182 23  | 191 19  | 322 51  | 232 38  | 15 5   | 229 41 |
|       | 12 198 30 | 171 57 | 199 58  | 208 19  | 322 29  | 239 17  | 14 20  | 229 ■  |
|       | 22 208 26 | 178 15 | 216 24  | 224 15  | 322 24D | 243 40  | 13 33  | 228 37 |
| Nov.  | 1 218 25  | 184 34 | 231 52  | 239 18  | 322 42  | 244 49R | 12 40R | 228 6  |
|       | 11 228 ■  | 190 51 | 246 30  | 253 24  | 323 17  | 242 8R  | 12 13R | 227 34 |
|       | 21 238 31 | 197 9  | 259 48  | 265 ■   | 324 12  | 236 32R | 11 43  | 226 56 |
| Dec.  | 1 248 38  | 203 26 | 268 58  | 269 26R | 325 23  | 231 22  | 11 24  | 226 30 |
|       | 11 258 47 | 209 ■  | 265 33R | 258 56  | 326 50  | 229 35D | 11 15  | 226 00 |
|       | 21 268 58 | 215 58 | 255 15  | 253 48D | 328 28  | 231 45  | 11 16D | 225 28 |
|       | 31 279 9  | 222 12 | 256 43  | 261 38  | 330 20  | 236 59  | 11 29  | 224 55 |

Ayanamsa: 21° 32' 43"

## Longitude of the Moon

|       | 1938 | Sun.   | Tue.   | Thurs. | Sat.   | Mon.   | Wed.   | Fri.   |
|-------|------|--------|--------|--------|--------|--------|--------|--------|
| Jan.  | 1    |        |        |        | 277 16 | 301 15 | 325 47 | 351 5  |
|       | 9    | 17 26  | 45 7   | 74 12  | 104 14 | 134 9  | 162 47 | 189 34 |
|       | 23   | 214 38 | 238 36 | 262 9  | 285 54 | 310 13 |        |        |
| Feb.  | 1    |        | 322 36 | 348 8  | 14 21  | 41 23  | 69 21  | 98 15  |
|       | 13   | 127 37 | 156 35 | 184 14 | 210 12 | 234 44 | 258 28 | 282 7  |
|       | 27   | 306 20 |        |        |        |        |        |        |
| March | 1    |        | 331 29 | 357 38 | 24 36  | 52 8   | 80 8   | 108 29 |
|       | 13   | 136 59 | 165 5  | 192 12 | 217 58 | 242 30 | 266 18 | 290 1  |
|       | 27   | 314 20 | 339 46 | 6 29   |        |        |        |        |
| April | 1    |        |        |        |        |        |        | 20 16  |
|       | 3    | 48 25  | 76 53  | 105 17 | 133 22 | 160 55 | 187 42 | 213 31 |
|       | 17   | 238 19 | 262 20 | 286 1  | 309 58 | 334 49 | 1 3    | 28 48  |
| May   | 1    | 57 43  | 87 3   | 116 1  | 144 7  | 171 10 | 197 12 | 222 19 |
|       | 15   | 246 42 | 270 34 | 294 15 | 318 12 | 342 58 | 9 7    | 36 57  |
|       | 29   | 66 17  | 96 21  |        |        |        |        |        |
| June  | 1    |        |        |        |        |        | 111 18 | 140 24 |
|       | 5    | 168 3  | 194 14 | 219 16 | 243 32 | 267 22 | 291 2  | 314 52 |
|       | 19   | 339 11 | 4 29   | 31 15  | 59 45  | 89 43  | 120 9  |        |
| July  | 1    |        |        |        |        |        |        | 149 46 |
|       | 3    | 177 41 | 203 48 | 228 34 | 252 33 | 276 14 | 299 57 | 323 58 |
|       | 17   | 348 29 | 13 50  | 40 24  | 68 33  | 98 12  | 128 35 | 158 23 |
|       | 31   | 186 31 |        |        |        |        |        |        |
| Aug.  | 1    |        |        |        |        | 199 51 | 225 15 | 249 28 |
|       | 7    | 273 10 | 296 53 | 320 58 | 345 35 | 10 50  | 36 58  | 64 8   |
|       | 21   | 92 38  | 122 13 | 152 2  | 180 55 | 208 7  | 233 37 |        |
| Sep.  | 1    |        |        | 245 51 | 269 45 | 293 27 | 317 30 | 342 12 |
|       | 11   | 7 41   | 33 58  | 60 55  | 88 44  | 117 20 | 146 22 | 175 7  |
|       | 25   | 202 47 | 228 59 | 253 48 |        |        |        |        |
| Oct.  | 1    |        |        |        | 277 46 | 301 31 | 325 40 | 350 41 |
|       | 9    | 16 45  | 43 47  | 71 32  | 104 43 | 128 5  | 156 22 | 184 10 |
|       | 23   | 211 6  | 236 54 | 261 38 | 285 36 | 309 21 |        |        |
| Nov.  | 1    |        | 321 20 | 345 54 | 11 40  | 38 40  | 67 8   | 96 3   |
|       | 13   | 124 53 | 153 7  | 180 32 | 207 3  | 232 42 | 257 32 | 281 41 |
|       | 27   | 305 27 | 329 15 |        |        |        |        |        |
| Dec.  | 1    |        |        | 353 42 | 10 23  | 46 43  | 75 40  | 105 31 |
|       | 11   | 135 11 | 163 44 | 190 53 | 216 48 | 241 47 | 266 10 | 290 7  |
|       | 25   | 313 50 | 337 37 | 1 56   | 27 23  |        |        |        |

Ayanamsa: 21° 22' 43"

## Longitudes of Planets

|       | 1939 | Sun    | Mars.   | Merc.   | Merc.   | Jupit.  | Venus  | Saturn | Rahu   |
|-------|------|--------|---------|---------|---------|---------|--------|--------|--------|
| Jan.  | 1    | 284 15 | 225 18  | 261 38  | 267 37  | 331 19  | 240 26 | 11 39  | 224 39 |
|       | 15   | 294 11 | 231 11  | 274 13  | 281 22  | 333 23  | 248 36 | 12 6   | 224 7  |
|       | 15   | 304 37 | 237 38  | 284 47  | 290 27  | 335 35  | 257 56 | 12 46  | 224 37 |
| Feb.  | 1    | 314 11 | 243 43  | 304 24  | 312 40  | 337 52  | 268 2  | 13 32  | 223 4  |
|       | 14   | 324 54 | 250 14  | 321 19  | 330 18  | 340 13  | 278 41 | 14 27  | 222 33 |
|       | 24   | 334 59 | 255 42  | 339 35  | 349 8   | 342 37  | 289 45 | 15 23  | 222 00 |
| March | 6    | 345 1  | 261 11  | 358 25  | 6 49    | 345 2   | 301 11 | 16 34  | 221 29 |
|       | 16   | 355 1  | 267 17  | 13 11   | 16 57   | 347 27  | 312 36 | 17 45  | 220 57 |
|       | 26   | 4 57   | 272 52  | 17 20R  | 14 59   | 349 51  | 324 17 | 18 57  | 220 26 |
| April | 5    | 14 49  | 278 17  | 10 56R  | 7 26R   | 352 11  | 331 5  | 20 13  | 219 58 |
|       | 15   | 24 38  | 284 27  | 5 44R   | 6 8D    | 354 38  | 347 56 | 21 29  | 219 22 |
|       | 25   | 34 24  | 288 11  | 8 32    | 12 30   | 356 40  | 359 52 | 22 45  | 218 50 |
| May   | 5    | 44 7   | 292 48  | 17 46   | 24 7    | 358 47  | 11 51  | 23 58  | 218 19 |
|       | 15   | 53 47  | 296 47  | 21 25   | 39 41   | 0 43    | 22 52  | 25 9   | 217 47 |
|       | 25   | 63 24  | 300 9   | 25 45   | 58 43   | 3 34    | 33 54  | 26 18  | 217 14 |
| June  | 4    | 73 00  | 302 42  | 68 54   | 80 22   | 4 12    | 47 13  | 27 21  | 216 43 |
|       | 14   | 82 33  | 304 17  | 91 6    | 101 15  | 5 34    | 60 11  | 28 18  | 216 12 |
|       | 24   | 92 6   | 304 42R | 110 36  | 118 47  | 6 49    | 72 13  | 29 9   | 215 40 |
| July  | 4    | 101 38 | 303 50R | 126 7   | 132 26  | 7 45    | 83 53  | 29 53  | 215 7  |
|       | 14   | 111 10 | 301 51R | 137 39  | 141 3D  | 8 24    | 96 36  | 30 23  | 214 37 |
|       | 24   | 120 43 | 299 11  | 143 41  | 144 5R  | 8 43    | 108 51 | 30 54  | 213 58 |
| Aug.  | 3    | 130 16 | 296 38  | 142 19R | 138 53  | 9 45    | 121 7  | 31 10  | 213 33 |
|       | 13   | 139 51 | 294 41  | 155 00  | 152 27  | 8 25R   | 133 27 | 31 16  | 213 00 |
|       | 23   | 149 29 | 293 56  | 132 40  | 156 3   | 7 47    | 145 48 | 31 12R | 212 29 |
| Sep.  | 2    | 159 8  | 294 32D | 142 16  | 156 34  | 6 53R   | 158 12 | 30 56R | 211 56 |
|       | 12   | 168 50 | 296 20  | 159 47  | 169 13  | 5 44    | 170 37 | 30 32  | 211 25 |
|       | 22   | 178 35 | 299 26  | 178 30  | 187 25  | 4 28    | 183 3  | 29 58  | 210 53 |
| Oct.  | 2    | 188 24 | 303 22  | 195 57  | 204 7   | 3 7     | 195 29 | 29 18R | 210 20 |
|       | 12   | 198 16 | 308 2   | 211 48  | 219 33  | 1 50R   | 208 50 | 28 34  | 209 50 |
|       | 22   | 208 11 | 313 16  | 226 49  | 234 44  | 0 41    | 220 28 | 27 48  | 209 11 |
| Nov.  | 1    | 218 10 | 318 56  | 240 00  | 246 7   | 159 48R | 232 57 | 26 59R | 208 46 |
|       | 11   | 228 11 | 324 57  | 253 39  | 253 39  | 256 10  | 245 28 | 26 14  | 208 13 |
|       | 21   | 238 10 | 331 10  | 253 10R | 253 32R | 358 54  | 257 53 | 25 35  | 207 44 |
| Dec.  | 1    | 248 23 | 337 37  | 242 00R | 252 2   | 358 56D | 270 23 | 25 4   | 207 11 |
|       | 11   | 258 32 | 344 12  | 238 23  | 242 22  | 359 20  | 282 51 | 24 40  | 206 40 |
|       | 21   | 268 43 | 350 11  | 247 53  | 253 26  | 0 4     | 295 16 | 24 28  | 206 11 |
|       | 31   | 278 54 | 357 27  | 261 27  | 268 45  | 1 4     | 307 41 | 24 25  | 205 38 |

Ayanamsha: 21° 33' 33"

## Longitude of the Moon

| 1939  | Sun.      | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|-------|-----------|--------|--------|--------|--------|--------|--------|
| Jan.  | 1 40 42   | 68 ■   | 98 ■   | 129 13 | 159 7  | 187 22 | 213 49 |
|       | 15 238 54 | 263 9  | 287 1  | 310 45 | 334 33 | 358 38 | 23 23  |
|       | 29 49 21  | 77 3   |        |        |        |        |        |
| Feb.  | 1         |        |        |        |        | 91 37  | 121 51 |
|       | 5 152 30  | 182 6  | 209 48 | 235 38 | 260 10 | 284 2  | 307 43 |
|       | 19 331 34 | 355 44 | 20 24  | 45 51  | 72 31  |        |        |
| March | 1         |        |        |        |        | 100 41 | 130 18 |
|       | 5 160 31  | 190 3  | 217 57 | 244 2  | 268 42 | 292 35 | 316 18 |
|       | 19 340 17 | 4 49   | 30 1   | 56 00  | 82 55  | 110 54 | 139 50 |
| April | 1         |        |        | 154 30 | 183 44 | 212 6  | 239 2  |
|       | 9 264 28  | 298 47 | 312 35 | 336 28 | 0 55   | 26 15  | 52 34  |
|       | 23 79 46  | 107 41 | 136 ■  | 164 36 |        |        |        |
| May   | 1         |        |        |        | 192 53 | 220 27 | ■ 58   |
|       | 7 272 18  | 296 40 | 320 30 | 344 25 | 8 58   | 34 40  | 61 40  |
|       | 21 89 47  | 118 28 | 147 ■  | 175 19 | 202 48 | 229 31 |        |
| June  | 1         |        | 242 34 | 268 ■  | 292 37 | 316 36 | 340 22 |
|       | 11 4 30   | 29 37  | 56 15  | 84 29  | 113 51 | 143 22 | 172 7  |
|       | 25 199 43 | 226 13 | 251 50 |        |        |        |        |
| July  | 1         |        |        | 276 44 | 301 3  | 324 55 | 348 38 |
|       | 9 12 42   | 37 44  | 64 23  | 92 53  | 122 50 | 153 2  | 182 17 |
|       | 23 209 58 | 236 11 | 261 21 | 285 49 | 309 51 |        |        |
| Aug.  | 1         | 321 45 | 345 27 | 9 18   | 33 44  | 59 24  | 86 49  |
|       | 13 116 ■  | 146 37 | 176 53 | 205 45 | 232 50 | 258 23 | ■ 54   |
|       | 27 306 53 | 330 38 |        |        |        |        |        |
| Sep.  | 1         |        |        |        |        |        | 6 22   |
|       | ■ 30 37   | 55 41  | 82 4   | 110 9  | 139 48 | 170 10 | 199 58 |
|       | 17 228 12 | 254 40 | 279 40 | 305 47 | 327 32 | 351 19 | 15 27  |
| Oct.  | 1 40 7    | 65 35  | 92 6   | 119 54 | 148 55 | 178 36 | 208 1  |
|       | 15 236 15 | 262 52 | 288 1  | 312 9  | 335 53 | 359 46 | 24 13  |
|       | 29 49 28  | 75 38  |        |        |        |        |        |
| Nov.  | 1         |        |        |        |        | 89 3   | 116 30 |
|       | 5 144 41  | 173 22 | 202 8  | 230 24 | 257 36 | 283 28 | 308 6  |
|       | 19 331 59 | 355 43 | 19 57  | 45 11  | 71 38  | 99 10  |        |
| Dec.  | 1         |        |        |        |        |        | 127 20 |
|       | 3 155 41  | 183 53 | 211 46 | 239 8  | 265 44 | 291 20 | 315 55 |
|       | 17 339 46 | 3 27   | 27 40  | 53 4   | 80 3   | 108 27 | 137 35 |
|       | 31 166 32 |        |        |        |        |        |        |

Ayanamsa: 21° 33' 33"

## Longitudes of Planets

|       | 1940 | Sun    | Mars   | Merc.   | Merc.   | Jupit. | Venus   | Saturn | Rahu   |
|-------|------|--------|--------|---------|---------|--------|---------|--------|--------|
| Jan.  | 5    | 284 00 | 0 40   | 268 46  | 270 17  | 1 38   | 313 53  | 24 28  | 205 20 |
|       | 15   | 294 11 | 7 49   | 284 1   | 291 57  | 3 8    | 320 13  | 24 44  | 204 49 |
|       | 25   | 304 22 | 14 38  | 300 7   | 308 33  | 4 46   | 338 29  | 25 10  | 204 16 |
| Feb.  | ■    | 314 31 | 21 26  | 317 15  | 326 13  | 6 37   | 350 39  | 25 45  | 203 45 |
|       | 14   | 324 39 | 28 17  | 335 19  | 344 9   | 8 37   | 2 42    | 26 28  | 203 13 |
|       | 24   | 334 44 | 35 1   | 351 30  | 357 44  | 10 44  | 14 37   | 27 22  | 202 41 |
| March | ■    | 344 46 | 41 46  | 0 12    | 359 27R | 12 58  | 26 19   | 28 22  | 202 10 |
|       | 15   | 354 46 | 48 20  | 354 55R | 350 25  | 15 17  | 37 47   | 29 27  | 201 38 |
|       | 25   | 4 42   | 55 10  | 347 30  | 346 56D | 17 39  | 48 58   | 30 36  | 201 8  |
| April | 4    | 14 34  | 61 49  | 348 37  | 352 5   | 20 3   | 59 44   | 31 48  | 200 35 |
|       | 14   | 24 24  | 68 25  | 356 55  | 2 51    | 22 28  | 70 30   | 33 ■   | 200 3  |
|       | 24   | 34 10  | 74 59  | 9 40    | 17 18   | 24 52  | 79 35   | 34 21  | 199 30 |
| May   | ■    | 43 52  | 81 31  | 25 44   | 34 55   | 27 15  | 88 15   | 35 37  | 198 57 |
|       | 14   | 53 33  | 88 00  | 44 51   | 55 27   | 29 35  | 95 29   | 36 53  | 198 29 |
|       | 24   | 63 10  | 94 27  | 66 24   | 77 10   | 31 51  | 100 46  | 38 3   | 197 54 |
| June  | 3    | 72 45  | 100 53 | 87 16   | 98 24   | 34 7   | 103 14  | 39 16  | 197 22 |
|       | 13   | 82 19  | 107 18 | 104 27  | 111 23  | 36 6   | 102 00R | 40 23  | 196 48 |
|       | 23   | 91 52  | 113 35 | 117 6   | 121 32  | 38 00  | 97 10   | 41 23  | 196 21 |
| July  | 3    | 101 24 | 120 3  | 124 12  | 125 18  | 39 47  | 91 7    | 42 17  | 195 47 |
|       | 13   | 110 56 | 126 34 | 124 22  | 121 45  | 41 24  | 87 18   | 43 ■   | 195 16 |
|       | 23   | 120 19 | 132 45 | 118 20  | 115 12  | 42 47  | 87 14   | 43 44  | 194 44 |
| Aug.  | 2    | 130 2  | 139 6  | 114 41  | 116 25  | 43 56  | 90 40   | 44 14  | 194 12 |
|       | 12   | 139 37 | 145 27 | 120 54  | 127 47  | 44 48  | 96 33   | 44 35  | 193 40 |
|       | 22   | 149 14 | 151 43 | 136 ■   | 146 7   | 45 23  | 104 12  | 44 45  | 193 9  |
| Sep.  | 1    | 158 54 | 158 10 | 155 58  | 165 36  | 45 40  | 113 3   | 44 45R | 192 37 |
|       | 11   | 168 36 | 164 33 | 174 45  | 183 27  | 45 30R | 122 47  | 44 34  | 192 5  |
|       | 21   | 178 21 | 170 57 | 191 44  | 199 36  | 45 12  | 133 ■   | 44 14  | 191 34 |
| Oct.  | 1    | 187 59 | 177 22 | 207 6   | 214 8   | 44 30  | 144 00  | 43 44  | 191 2  |
|       | 11   | 198 1  | 183 48 | 221 1   | 220 43  | 43 30  | 155 14  | 43 8   | 190 30 |
|       | 21   | 207 56 | 190 17 | 232 14  | ■ 15    | 42 18  | 166 46  | 42 20  | 189 58 |
|       | 31   | 217 55 | 196 47 | 238 5   | ■ 36R   | 40 58  | 178 33  | 41 35  | 189 28 |
| Nov.  | 10   | 227 57 | 203 18 | 231 23R | 225 8   | 39 47  | 190 31  | 40 46  | 188 55 |
|       | 20   | ■ 1    | 209 52 | 222 6   | 223 37  | 38 20  | 202 38  | 40 00  | 188 ■  |
|       | 30   | 248 9  | 216 27 | 228 12  | 234 23  | 37 14  | 214 52  | 39 18  | 187 50 |
| Dec.  | 10   | 258 18 | 223 4  | 241 24  | 248 45  | ■ 21   | 227 12  | ■ 43   | 187 20 |
|       | 20   | ■ 28   | ■ 44   | 250 16  | 263 57  | 35 52  | 239 37  | 38 16  | 186 ■  |
|       | 30   | 278 39 | 236 25 | 273 17  | 280 43  | 35 40  | 253 ■   | 38 00  | 186 17 |

AYANAMSA : 21° 34' 24"



## Longitude of the Moon

| 1940    | Sun.   | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  |        |        |        |        | 180 45 | 208 31 | 235 28 |
| 7       | 261 41 | 287 11 | 311 54 | 335 ■  | 359 33 | 23 19  | 47 57  |
| 21      | 74 7   | 102 9  | 131 43 | 161 44 | 191 1  | 219 00 |        |
| Feb. 1  |        |        | 232 30 | 258 37 | 283 52 | 308 27 | 332 30 |
| 11      | 356 10 | 19 46  | -43 50 | 69 00  | 95 54  | 124 44 | 154 58 |
| 25      | 185 21 | 214 38 | 242 18 |        |        |        |        |
| March 1 |        |        |        |        |        |        | 253 31 |
| 3       | 280 59 | 305 30 | 329 27 | 353 7  | 16 44  | 40 39  | 65 17  |
| 17      | 91 8   | 118 40 | 147 55 | 178 14 | 208 25 | 237 22 | 264 33 |
| 31      | 290 7  |        |        |        |        |        |        |
| April 1 |        |        |        |        | 302 26 | 326 27 | 350 5  |
| 7       | 13 44  | 37 44  | 62 19  | 87 48  | 114 26 | 142 26 | 171 42 |
| 21      | 201 35 | 231 7  | 259 23 | 285 57 | 310 58 |        |        |
| May 1   |        |        |        |        |        | 334 59 | 358 36 |
| 5       | 22 22  | 46 43  | 71 52  | 97 56  | 124 55 | 152 46 | 181 24 |
| 19      | 210 29 | 239 24 | 267 24 | 293 58 | 319 4  | 343 ■  | 8 45   |
| June 1  |        |        |        | 18 37  | 42 52  | ■ 6    | 94 27  |
| 9       | 121 43 | 149 36 | 177 48 | 206 9  | 234 25 | 262 12 | 289 3  |
| 23      | 314 39 | 339 6  | 2 51   | 26 34  |        |        |        |
| July 1  |        |        |        |        | 50 57  | 76 34  | 103 35 |
| 7       | 131 42 | 160 18 | 188 48 | 216 55 | 244 31 | 271 30 | 297 40 |
| 21      | 322 51 | 347 7  | 10 48  | 34 31  | 58 55  | 84 41  |        |
| Aug. 1  |        |        | 98 11  | 126 23 | 155 37 | 184 58 | 213 41 |
| 11      | 241 26 | 268 13 | 294 7  | 319 12 | 343 31 | 7 16   | 30 51  |
| 25      | 54 48  | 79 46  | 106 19 | 134 40 |        |        |        |
| Sep. 1  | 149 25 | 179 26 | 209 13 | 237 54 | 265 10 | 291 8  | 316 5  |
| 15      | 340 19 | 4 5    | 27 40  | 51 25  | 76 49  | 101 24 | 128 37 |
| 29      | 157 35 |        |        |        |        |        |        |
| Oct. 1  |        | 187 45 | 218 00 | 247 13 | 274 46 | 300 40 | 325 20 |
| 13      | 349 15 | 12 52  | 36 31  | 60 31  | 85 8   | 110 43 | 137 39 |
| 27      | 166 6  | 195 52 | 226 6  |        |        |        |        |
| Nov. 1  |        |        |        |        |        |        | 241 1  |
| 3       | 269 47 | 296 ■  | 321 59 | 346 6  | 9 42   | 33 22  | 57 27  |
| 17      | 82 11  | 107 41 | 134 3  | 161 27 | 189 59 | 219 25 | 249 1  |
| Dec. 1  | 277 44 | 304 50 | 330 13 | 354 21 | 17 57  | 41 42  | 68 7   |
| 15      | 91 26  | 117 ■  | 144 23 | 172 5  | 200 12 | 228 50 | 257 35 |
| 29      | 285 44 | 312 37 |        |        |        |        |        |

Ayanamsa: 21° 34' 24"

## Longitudes of Planets

|       | 1941 | Sun    | Mars   | Merc.   | Merc.   | Jupit. | Venus  | Saturn | Rahu   |
|-------|------|--------|--------|---------|---------|--------|--------|--------|--------|
| Jan.  | 5    | 284 46 | 240 27 | 281 13  | 289 18  | 35 43  | 259 31 | 37 55R | 185 58 |
|       | 15   | 294 58 | 247 12 | 297 34  | 306 3   | 36 4   | 271 59 | 37 55D | 185 25 |
|       | 25   | 305 8  | 253 58 | 314 40  | 321 36  | 36 45  | 284 30 | 38 7D  | 184 52 |
| Feb.  | ■    | 315 18 | 260 47 | 331 29  | 338 24  | 37 46  | 297 00 | 38 29  | 184 21 |
|       | 14   | 325 25 | 267 37 | 342 41  | 343 4R  | 39 00  | 309 30 | 39 4   | 183 50 |
|       | 24   | 335 30 | 274 28 | 339 33  | 334 24  | 40 31  | 321 58 | 39 46  | 183 18 |
| March | 6    | 345 32 | 281 21 | 330 20  | 328 55  | 42 13  | 334 27 | 40 38  | 182 47 |
|       | 16   | 355 31 | 288 15 | 330 00D | 333 7   | 44 4   | 346 54 | 41 36  | 182 14 |
|       | 26   | 5 27   | 295 10 | 327 41  | 343 22  | 46 5   | 359 20 | 42 41  | 181 43 |
| April | ■    | 15 19  | 302 ■  | 349 56  | 357 12  | 48 13  | 11 45  | 43 50  | 181 11 |
|       | 15   | 25 8   | 308 58 | 5 10    | 13 49   | 50 25  | 24 ■   | 45 00  | 180 40 |
|       | 25   | 34 54  | 315 52 | 23 8    | 33 8    | 52 43  | 36 30  | 46 16  | 180 8  |
| May   | 5    | 44 36  | 322 43 | 43 43   | 54 34   | 55 3   | 48 50  | 47 34  | 179 38 |
|       | 15   | 54 16  | 329 31 | 65 9    | 74 57   | 57 24  | 61 9   | 48 51  | 179 4  |
|       | 25   | 63 53  | 336 13 | 83 38   | 91 2    | 59 45  | 73 27  | 50 ■   | 178 33 |
| June  | ■    | 73 29  | 342 49 | 97 7    | 101 38  | 62 20  | 86 56  | 51 23  | 178 1  |
|       | 14   | 83 2   | 349 13 | 104 33  | 103 39  | 64 25  | 97 58  | 52 35  | 177 28 |
|       | 24   | 92 35  | 355 25 | 104 53R | 102 35R | 66 40  | 110 12 | 53 43  | 176 56 |
| July  | 4    | 102 7  | 1 18   | 99 36R  | 97 8R   | 68 51  | 122 24 | 54 46  | 176 25 |
|       | 14   | 111 39 | 6 49   | 96 18D  | 97 39D  | 70 57  | 134 35 | 55 43  | 175 53 |
|       | 24   | 121 12 | 11 50  | 101 18  | 107 11  | 73 26  | 146 45 | 56 35  | 175 22 |
| Aug.  | ■    | 130 46 | 16 13  | 115 ■   | 124 21  | 74 16  | 158 52 | 57 16  | 174 50 |
|       | 13   | 140 21 | 19 46  | 134 25  | 144 6   | 76 27  | 170 57 | 57 50  | 174 18 |
|       | 23   | 149 58 | 22 19  | 154 26  | 163 40  | 77 56  | 182 59 | 58 15  | 173 47 |
| Sep.  | 2    | 159 37 | 23 36  | 172 32  | 180 48  | 79 12  | 194 57 | 58 30  | 173 14 |
|       | 12   | 169 20 | 23 28R | 188 35  | 195 54  | 80 12  | 206 51 | 58 33R | 172 43 |
|       | 22   | 179 5  | 21 57R | 202 44  | 208 58  | 80 55  | 218 40 | 58 26  | 172 12 |
| Oct.  | 2    | 188 54 | 19 28R | 214 27  | 218 51  | 81 20  | 230 22 | 58 9R  | 171 40 |
|       | 12   | 198 46 | 16 12R | 221 38  | 221 53R | 81 26R | 241 57 | 57 40  | 171 8  |
|       | 22   | 208 42 | 13 26R | 219 43R | 212 50R | 81 12R | 253 22 | 57 4   | 170 35 |
| Nov.  | 1    | 218 41 | 11 37  | 207 38  | 206 33  | 80 37R | 264 35 | 56 22  | 170 00 |
|       | 11   | 228 42 | 11 10  | 209 41  | 215 35  | 79 45  | 275 34 | 55 35  | 169 32 |
|       | 21   | 238 47 | 11 52  | 222 25  | 229 55  | 78 38  | 285 58 | 54 45  | 169 00 |
| Dec.  | 1    | 248 55 | 13 50  | 237 ■   | 245 26  | 77 22R | 295 51 | 54 00R | 168 28 |
|       | 11   | 259 4  | 16 43  | 253 14  | 261 ■   | 76 00  | 304 51 | 53 14  | 167 54 |
|       | 21   | 269 14 | 20 23  | 268 57  | 276 55  | 74 41  | 312 32 | 52 36  | 167 25 |
|       | 31   | 279 26 | 24 36  | 284 59  | 293 10  | 72 59  | 318 15 | 52 7   | 166 52 |

Ayanamsa: 21° 35' 14"

## Longitude of the Moon

| 1941    | Sun    | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  |        |        |        |        |        | 325 29 | 350 13 |
| 5       | 14 2   | 37 40  | 61 49  | 87 00  | 113 25 | 140 51 | 168 51 |
| 10      | 197 2  | 225 13 | 253 14 | 280 51 | 307 40 | 333 23 | 357 59 |
| Feb. 1  |        |        |        | 9 57   | 33 36  | 57 24  | 82 3   |
| 9       | 108 4  | 135 35 | 164 12 | 193 14 | 222 00 | 250    | 277 22 |
| 23      | 303 47 | 329 19 | 354 50 |        |        |        |        |
| March 1 |        |        |        | 17 59  | 41 36  | 65 24  | 89 58  |
| 9       | 115 54 | 143 32 | 172 39 | 202 31 | 232 5  | 260 34 | 237 42 |
| 23      | 313 34 | 338 28 | 2 40   | 26 27  | 50 4   |        |        |
| April 1 |        | 61 56  | 86 3   | 111 6  | 137    | 165 55 | 195 44 |
| 13      | 226 8  | 255 53 | 284 5  | 310 33 | 335 35 | 359 43 | 23 25  |
| 27      | 47 3   | 70 52  |        |        |        |        |        |
| May 1   |        |        | 95 09  | 120 14 | 146 33 | 174 28 | 203 59 |
| 11      | 234 24 | 264 28 | 293 2  | 319 39 | 344 39 | 8 38   | 32 15  |
| 25      | 55 56  | 80 1   | 104 39 | 130 00 |        |        |        |
| June 1  | 143 2  | 169 58 | 198 17 | 227 51 | 257 55 | 287 15 | 314 57 |
| 15      | 340 48 | 5 16   | 29 00  | 54 40  | 76 45  | 101 31 | 127 2  |
| 29      | 153 18 |        |        |        |        |        |        |
| July 1  |        | 180 25 | 208 29 | 237 26 | 266 45 | 295 33 | 323 1  |
| 13      | 348 51 | 13 22  | 37 9   | 60 55  | 85 13  | 110 25 | 136 34 |
| 27      | 163 33 | 191 12 | 219 21 |        |        |        |        |
| Aug. 1  |        |        |        |        |        |        | 233 34 |
| 3       | 262 7  | 290 25 | 317 54 | 344    | 9 8    | 33 13  | 56 57  |
| 17      | 80 59  | 105 53 | 131 59 | 159 18 | 187 29 | 216 5  | 244    |
| 31      | 272 44 |        |        |        |        |        |        |
| Sep. 1  |        |        |        |        | 286 34 | 313 38 | 339 46 |
| 7       | 4 55   | 59 14  | 53 2   | 76 50  | 101 12 | 127 44 | 153 46 |
| 21      | 182 15 | 211 36 | 240 58 | 269 34 | 297 3  |        |        |
| Oct. 1  |        |        |        |        |        | 224 24 | 348 49 |
| 5       | 13 28  | 37 33  | 61 18  | 85 4   | 109 21 | 134 43 | 161 41 |
| 19      | 180 26 | 220 27 | 250 37 | 279 45 | 307 16 | 333 16 | 358 0  |
| Nov. 1  |        |        |        | 10 19  | 34 10  | 58 5   | 81 50  |
| 9       | 105 50 | 130 29 | 156 21 | 183 56 | 213 21 | 243 55 | 274 14 |
| 23      | 303 3  | 329 55 | 355 10 | 3 25   |        |        |        |
| Dec. 1  |        |        |        |        | 43 12  | 66 56  | 90 49  |
| 7       | 115 2  | 139 50 | 165 36 | 192 49 | 221 44 | 251 57 | 282 17 |
| 21      | 311 22 | 338 32 | 3 56   | 28 9   | 51 53  | 75     |        |

Ayanamea: 21° 35' 14"

## Longitudes of Planets

|       | 1942 | Sun    | Mars   | Mer.    | More.  | Jupit.  | Venus  | Saturn | Rahu   |
|-------|------|--------|--------|---------|--------|---------|--------|--------|--------|
| Jan.  | 5    | 284 31 | 26 55  | 293 10  | 301 25 | 72 57R  | 320 4  | 51 56R | 166 43 |
|       | 15   | 294 43 | 31 47  | 309 33  | 317 10 | 72 7    | 321 3R | 51 42  | 166 5  |
|       | 25   | 304 53 | 36 57  | 323 23  | 326 46 | 71 35   | 318 00 | 51 38D | 165 33 |
| Feb.  | 4    | 315 3  | 42 21  | 325 53R | 321 9R | 71 23   | 312 10 | 51 46  | 165 2  |
|       | 14   | 325 10 | 47 57  | 315 33R | 312 10 | 71 31D  | 307 6  | 52 5   | 164 31 |
|       | 24   | 335 15 | 53 41  | 311 50  | 314 2D | 71 59   | 305 33 | 52 35  | 163 59 |
| March | 6    | 345 17 | 59 31  | 318 00  | 323 13 | 72 46   | 307 52 | 53 14  | 163 27 |
|       | 16   | 355 16 | 65 25  | 320 20  | 336 11 | 73 49   | 313 9  | 54 2   | 162 55 |
|       | 26   | 5 12   | 71 23  | 343 40  | 351 43 | 75 7    | 320 25 | 54 58  | 162 24 |
| April | 5    | 15 4   | 77 24  | 0 22    | 9 36   | 76 38   | 329 3  | 56 90  | 161 52 |
|       | 15   | 24 54  | 83 27  | 19 28   | 29 51  | 78 20   | 338 35 | 57 11  | 161 20 |
|       | 25   | 34 39  | 89 32  | 40 31   | 50 56  | 80 12   | 348 45 | 58 20  | 160 46 |
| May   | 5    | 44 22  | 95 38  | 60 33   | 52     | 82 10   | 359 21 | 59 35  | 160 17 |
|       | 15   | 54 2   | 101 46 | 75 40   | 81 19  | 84 15   | 10 18  | 60 51  | 159 45 |
|       | 25   | 63 39  | 107 53 | 84 9    | 85 34  | 86 25   | 21 28  | 62 9   | 159 12 |
| June  | 4    | 73 15  | 114 2  | 85 6    | 83 4R  | 88 39   | 32 51  | 63 26  | 158 40 |
|       | 14   | 82 49  | 120 13 | 80 17R  | 78 30R | 90 55   | 44 21  | 64 39  | 158 10 |
|       | 24   | 92 21  | 126 23 | 77 1    | 77 57D | 93 12   | 56 00  | 65 57  | 157 38 |
| July  | 4    | 101 53 | 132 35 | 80 43   | 85 44  | 95 30   | 67 44  | 67 7   | 157 5  |
|       | 14   | 111 26 | 138 49 | 92 24   | 100 42 | 97 44   | 79 34  | 68 13  | 156 34 |
|       | 24   | 120 58 | 145 1  | 110 18  | 120 40 | 99 57   | 91 30  | 69 14  | 156 1  |
| Aug.  | 3    | 130 32 | 151 21 | 131 8   | 141 15 | 102 5   | 103 20 | 70 9   | 155 31 |
|       | 13   | 140 7  | 157 40 | 150 46  | 159 43 | 104 13  | 115 36 | 70 55  | 154 58 |
|       | 23   | 149 44 | 164 1  | 168 3   | 175 49 | 106 12  | 127 46 | 71 35  | 154 26 |
| Sep.  | 2    | 159 24 | 170 24 | 182 31  | 189 36 | 108 3   | 140 1  | 72 3   | 153 53 |
|       | 12   | 169 6  | 176 50 | 195 27  | 200 25 | 109 46  | 162 20 | 72 22  | 153 23 |
|       | 22   | 178 51 | 183 18 | 204 1   | 205 55 | 111 18  | 164 43 | 72 30  | 152 51 |
| Oct.  | 2    | 188 40 | 189 49 | 205 6R  | 201 13 | 112 38  | 177 1  | 72 29R | 152 20 |
|       | 12   | 198 32 | 196 23 | 195 27  | 191 13 | 113 42  | 189 38 | 72 15  | 151 48 |
|       | 22   | 208 27 | 203 1  | 191 10  | 195 8  | 114 31  | 202 7  | 71 52  | 151 16 |
| Nov.  | 1    | 218 26 | 209 42 | 201 33  | 209 1  | 115 2   | 214 39 | 71 20  | 150 44 |
|       | 11   | 229 28 | 216 26 | 217 3   | 225 6  | 115 14  | 227 13 | 70 38  | 150 13 |
|       | 21   | 228 33 | 223 15 | 233 6   | 241 2  | 115 6R  | 239 47 | 69 53  | 149 40 |
| Dec.  | 1    | 248 40 | 230 8  | 248 54  | 256 45 | 114 39  | 252 21 | 69 4R  | 149 8  |
|       | 11   | 258 49 | 237 8  | 264 1   | 272 09 | 113 53  | 264 55 | 68 14  | 148 37 |
|       | 21   | 268 59 | 244 1  | 280 23  | 288 14 | 112 52  | 277 29 | 67 29  | 148 6  |
|       | 31   | 279 10 | 251 8  | 295 53  | 302 53 | 111 38R | 290 4  | 66 48  | 147 33 |

Ayanamsa: 21° 36' 4"

## Longitude of the Moon

|       | 1942 | Sun    | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|-------|------|--------|--------|--------|--------|--------|--------|--------|
| Jan.  | 1    |        |        | 87 38  | 112 00 | 136 55 | 162 32 | 189 5  |
|       | 11   | 216 49 | 245 48 | 275 31 | 304 55 | 333 1  | 359 24 | 24 18  |
|       | 25   | 48 17  | 72 00  | 96 2   | 120 43 |        |        |        |
| Feb.  | 1    | 233 22 | 159 18 | 186 2  | 213 31 | 241 43 | 270 25 | 299 8  |
|       | 15   | 327 14 | 354 9  | 19 43  | 44 11  | 68 1   | 91 52  | 116 19 |
| March | 1    | 141 45 | 168 22 | 190 1  | 224 18 | 252 47 | 281 5  | 308 55 |
|       | 15   | 336 4  | 2 19   | 27 36  | 52 1   | 75 52  | 99 41  | 124 6  |
|       | 29   | 149 40 | 176 44 |        |        |        |        |        |
| April | 1    |        |        |        |        |        | 190 56 | 219 48 |
|       | 5    | 249 6  | 277 54 | 305 45 | 332 34 | 358 30 | 23 40  | 48 10  |
|       | 19   | 72 8   | 95 51  | 119 49 | 144 38 | 170 56 | 199 2  |        |
| May   | 1    |        |        |        |        |        |        | 228 40 |
|       | 3    | 258 47 | 288 12 | 316 11 | 342 42 | 8 6    | 32 44  | 56 53  |
|       | 17   | 80 42  | 104 25 | 128 22 | 153 5  | 179 14 | 207 15 | 237 3  |
|       | 31   | 267 38 |        |        |        |        |        |        |
| June  | 1    |        |        |        |        | 282 46 | 311 58 | 339 22 |
|       | 7    | 5 10   | 29 52  | 53 56  | 77 44  | 101 27 | 125 20 | 149 43 |
|       | 21   | 175 3  | 201 55 | 230 36 | 260 46 | 291 15 |        |        |
| July  | 1    |        |        |        |        |        | 326 42 | 348 22 |
|       | 5    | 14 18  | 38 56  | 62 53  | 86 37  | 110 26 | 134 34 | 159 17 |
|       | 19   | 184 52 | 211 42 | 240 1  | 269 36 | 299 37 | 328 55 | 356 42 |
| Aug.  | 1    |        |        |        | 9 56   | 35 17  | 59 33  | 83 20  |
|       | 9    | 107 1  | 131 20 | 156 13 | 181 54 | 208 31 | 236 8  | 264 42 |
|       | 23   | 293 51 | 322 54 | 351 5  | 17 56  | 43 21  |        |        |
| Sep.  | 1    |        | 55 37  | 79 37  | 103 22 | 127 28 | 152 22 | 178 18 |
|       | 13   | 205 15 | 233 00 | 261 14 | 289 40 | 318 00 | 345 50 | 12 50  |
|       | 27   | 38 44  | 63 31  |        |        |        |        |        |
| Oct.  | 1    |        |        | 87 30  | 111 14 | 135 22 | 160 31 | 187 1  |
|       | 11   | 214 51 | 243 30 | 272 15 | 300 34 | 328 15 | 355 14 | 21 30  |
|       | 25   | 46 56  | 71 32  | 95 26  | 119 6  |        |        |        |
| Nov.  | 1    | 131 3  | 155 33 | 181 28 | 209 8  | 238 17 | 267 58 | 297 8  |
|       | 15   | 325 11 | 352 4  | 18 2   | 43 15  | 67 50  | 91 51  | 115 30 |
|       | 29   | 139 13 |        |        |        |        |        |        |
| Dec.  | 1    |        | 163 36 | 189 22 | 217 3  | 246 32 | 276 54 | 306 47 |
|       | 13   | 335 15 | 2 9    | 27 46  | 52 31  | 76 41  | 100 30 | 124 11 |
|       | 27   | 147 55 | 172 18 | 197 54 |        |        |        |        |

Ayanamasa: 21° 36' 4"

## Longitudes of Planets

|       | 1943 | Sun    | Mars.  | Merc.   | Mero.   | Jupit.  | Venus   | Saturn | Rahu   |
|-------|------|--------|--------|---------|---------|---------|---------|--------|--------|
| Jan.  | 5    | 284 16 | 254 41 | 302 53  | 308 22  | 111 00R | 300 21  | 66 30R | 147 17 |
|       | 15   | 281 28 | 261 51 | 310 48  | 308 44R | 109 38R | 308 52  | 66 2R  | 146 45 |
|       | 25   | 304 38 | 269 4  | 303 3R  | 297 50  | 108 29R | 321 25  | 65 43R | 146 14 |
| Feb.  | 5    | 314 48 | 276 20 | 295 50  | 295 47  | 107 10R | 333 54  | 65 36  | 145 43 |
|       | 14   | 324 55 | 283 40 | 300 55  | 303 36  | 106 16  | 346 32  | 65 39D | 145 10 |
|       | 24   | 335 00 | 291 3  | 309 12  | 315 48  | 105 14  | 358 45  | 65 54  | 144 11 |
| March | 6    | 345 11 | 298 28 | 322 52  | 329 57  | 105 16  | 11 6    | 66 19  | 144 7  |
|       | 16   | 355 2  | 305 57 | 338 33  | 347 8   | 105 11D | 23 22   | 66 55  | 143 35 |
|       | 26   | 58     | 313 28 | 356 17  | 5 55    | 105 30  | 33      | 67 39  | 143 11 |
| April | 5    | 14 50  | 320 30 | 16 3    | 26 27   | 106 6   | 47 38   | 68 32  | 142 31 |
|       | 15   | 24 39  | 328 52 | 36 40   | 45 59   | 107 00  | 59 36   | 69 28  | 142 00 |
|       | 25   | 34 25  | 336 11 | 53 50   | 59 50   | 108 11  | 71 25   | 70 38  | 141 28 |
| May   | 5    | 44 8   | 343 37 | 63 48   | 65 36   | 109 30  | 11 5    | 71 48  | 140 56 |
|       | 15   | 53 48  | 351 7  | 65 18R  | 67 17R  | 111 3   | 34      | 73 00  | 140 18 |
|       | 25   | 11 25  | 358 36 | 60 30R  | 68 6R   | 112 46  | 105 49  | 74 17  | 139 51 |
| June  | 4    | 73 1   | 6 0    | 57 2D   | 57 46   | 114 37  | 116 11  | 75 35  | 139 20 |
|       | 14   | 11 35  | 13 19  | 60 20   | 64 35   | 116 35  | 127 21  | 76 54  | 138 49 |
|       | 24   | 92 7   | 20 32  | 70 47   | 77 45   | 118 30  | 137 28  | 78 11  | 138 17 |
| July  | 4    | 101 10 | 27 35  | 86 26   | 86 15   | 120 46  | 146 54  | 79 26  | 137 44 |
|       | 14   | 111 12 | 34 29  | 106 49  | 117 32  | 122 56  | 155 24  | 80 38  | 137 14 |
|       | 24   | 120 44 | 41 12  | 127 52  | 137 39  | 125 9   | 162 32  | 81 48  | 136 42 |
| Aug.  | 3    | 130 18 | 47 41  | 146 10  | 155 2   | 127 21  | 167 55  | 82 51  | 136 11 |
|       | 13   | 139 11 | 53 52  | 162 45  | 169 47  | 129 34  | 170 27  | 83 49  | 135 37 |
|       | 23   | 149 30 | 64 43  | 176 11  | 181 30  | 131 44  | 169 21R | 84 40  | 135 7  |
| Sep.  | 2    | 159 10 | 65 9   | 185 49  | 188 40  | 133 52  | 164 40R | 85 23  | 134 32 |
|       | 12   | 168 52 | 70 5   | 189 26  | 187 36R | 135 56  | 158 11  | 85 58  | 134 11 |
|       | 22   | 178 37 | 74 24  | 191 9R  | 177 54  | 137 54  | 154 50  | 86 21  | 133 30 |
| Oct.  | 2    | 188 11 | 77 56  | 174 50  | 175 53D | 139 45  | 154 51D | 86 34  | 133 00 |
|       | 12   | 198 18 | 80 30  | 180 38  | 187 11  | 141 27  | 158 23  | 86 37R | 132 11 |
|       | 22   | 208 13 | 81 58  | 195 46  | 204 9   | 143 00  | 164 58  | 86 29  | 131 56 |
| Nov.  | 1    | 218 11 | 82 6R  | 212 32  | 220 45  | 144 19  | 172 29  | 86 8   | 131 24 |
|       | 11   | 228 13 | 80 44  | 229 59  | 236 45  | 145 25  | 181 40  | 85 40  | 130 52 |
|       | 21   | 238 18 | 78 00  | 244 34  | 252 19  | 146 16  | 192 12  | 85 2   | 130 20 |
| Dec.  | 1    | 248 25 | 74 24  | 260 1   | 267 37  | 147 49  | 193 16  | 84 18  | 129 11 |
|       | 11   | 258 34 | 70 39  | 276 6   | 273 14  | 147 3   | 213 11  | 84 11  | 129 17 |
|       | 21   | 268 44 | 67 11  | 293 20  | 291 17  | 148 31  | 225 4   | 82 41  | 128 11 |
|       | 31   | 278 56 | 65 30  | 310 46R | 301 39  | 146 38  | 236 11  | 81 54  | 128 12 |

Ayanamsa: 21° 36' 55"

## Longitude of the Moon

| 1943  | Sun. | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|-------|------|--------|--------|--------|--------|--------|--------|
| Jan.  | 1    |        |        |        |        |        | 211 20 |
|       | 3    | 239 40 | 269 38 | 300 12 | 329 58 | 358 7  | 49 32  |
|       | 17   | 73 42  | 97 27  | 121 7  | 144 58 | 169 15 | 194 21 |
|       | 31   | 248 33 |        |        |        |        | 220 41 |
| Feb.  | 1    |        |        |        | 283 5  | 292 58 | 323 6  |
|       | 7    | 352 21 | 19 57  | 45 50  | 70 25  | 94 14  | 117 52 |
|       | 21   | 166 12 | 191 23 | 217 29 | 244 36 |        | 141 46 |
| March | 1    |        |        |        | 272 48 | 301 52 | 331 17 |
|       | 7    | 0 11   | 27 50  | 53 54  | 78 35  | 102 26 | 126 5  |
|       | 21   | 175 2  | 260 56 | 227 47 | 255 22 | 283 28 | 311 54 |
| April | 1    |        | 326 10 | 354 34 | 22 19  | 48 56  | 74 14  |
|       | 11   | 98 27  | 122 8  | 145 58 | 170 37 | 196 31 | 223 43 |
|       | 25   | 280 17 | 308 37 | 336 37 |        |        | 251 50 |
| May   | 1    |        |        | 4 11   | 31 8   | 57 12  | 82 14  |
|       | 9    | 106 22 | 130 1  | 153 50 | 178 33 | 204 44 | 232 31 |
|       | 23   | 290 42 | 310 27 | 347 21 | 14 23  | 40 36  |        |
| June  | 1    |        | 53 25  | 78 25  | 102 40 | 126 22 | 149 58 |
|       | 13   | 199 30 | 226 37 | 255 27 | 285 19 | 315 5  | 343 53 |
|       | 27   | 37 37  | 62 53  |        |        |        | 11 22  |
| July  | 1    |        | 87 23  | 111 18 | 134 54 | 158 32 | 182 42 |
|       | 11   | 208 00 | 234 58 | 263 45 | 293 49 | 324 5  | 353 25 |
|       | 25   | 47 22  | 72 19  | 96 27  | 120 8  |        | 21 11  |
| Aug.  | 1    | 131 55 | 155 34 | 179 34 | 204 21 | 230 21 | 257 56 |
|       | 15   | 317 18 | 347 25 | 16 22  | 43 34  | 69 6   | 93 26  |
|       | 29   | 140 43 | 164 34 |        |        |        | 117 9  |
| Sep.  | 1    |        |        |        |        | 176 40 | 201 24 |
|       | 5    | 227 00 | 253 42 | 281 41 | 310 53 | 340 44 | 10 16  |
|       | 19   | 65 00  | 89 55  | 113 49 | 137 24 | 161 14 | 185 43 |
| Oct.  | 1    |        |        |        |        |        | 211 2  |
|       | 3    | 237 12 | 264 11 | 291 57 | 320 30 | 349 34 | 18 31  |
|       | 17   | 72 58  | 97 56  | 121 52 | 145 28 | 169 27 | 194 18 |
|       | 31   | 247 15 |        |        |        |        | 220 17 |
| Nov.  | 1    |        |        |        | 261 00 | 288 49 | 316 54 |
|       | 7    | 345 10 | 13 24  | 41 10  | 67 57  | 93 27  | 117 47 |
|       | 21   | 165 11 | 189 39 | 215 24 | 242 33 | 270 46 |        |
| Dec.  | 1    |        |        |        |        | 299 24 | 327 53 |
|       | 5    | 355 57 | 23 30  | 50 23  | 76 25  | 101 29 | 125 40 |
|       | 19   | 173 27 | 197 27 | 223 12 | 250 38 | 279 30 | 309 2  |

Ayanamsa: 21° 36' 55"



## Longitudes of Planets

| 1944  | Sun       | Mars   | Merc.   | Merc.   | Jupit.  | Venus  | Saturn  | Rahu   |
|-------|-----------|--------|---------|---------|---------|--------|---------|--------|
| Jan.  | ■ 284 ■   | 65 2R  | 291 39R | 285 22  | 146 14R | 242 44 | 81 31R  | 127 55 |
| 15    | 294 13    | 65 2D  | 280 9   | 278 41D | 146 23  | 234 43 | 80 50   | 127 20 |
| 25    | 304 24    | 64 15  | 280 29  | 284 23  | 144 17  | 200 47 | 87 19   | 124 54 |
| Feb.  | 4 314 33  | 68 29  | 289 44  | 295 53  | 143 8   | 278 57 | 79 55   | 120 22 |
| 14    | 324 41    | 71 20  | 302 22  | 309 53  | 141 44  | 291 11 | 79 43   | 125 51 |
| ■     | 334 46    | 75 8   | 317 32  | 325 37  | 140 26  | 303 26 | 79 41D  | 125 13 |
| March | 5 ■ 44 48 | 79 15  | 324 4   | 343 14  | 139 16  | 315 43 | 79 51   | 124 47 |
| 15    | 354 47    | 83 45  | 332 30  | 2 21    | 138 17  | 328 00 | 80 13   | 124 16 |
| 25    | 3 44      | 88 33  | 12 26   | 22 21   | 137 34  | 340 19 | 80 44   | 123 43 |
| April | 4 14 36   | 93 35  | 31 17   | 38 32   | 137 9R  | 352 37 | 81 24   | 123 12 |
| 14    | 24 25     | 98 50  | 43 33   | 48 6    | 137 2D  | 4 54   | 82 14   | 122 40 |
| 24    | 34 11     | 104 14 | 45 7R   | 54 6R   | 137 14  | 17 12  | 83 11   | 122 8  |
| May   | 4 43 54   | 104 44 | 41 1R   | 54 14R  | 137 4   | 29 29  | 84 14   | 120 35 |
| 14    | 53 34     | 115 22 | 36 51R  | 37 18   | 137 30  | 41 46  | 85 23   | 121 5  |
| 24    | 63 11     | 121 6  | 30 35   | 43 31   | 139 32  | 54 2   | 86 35   | 120 33 |
| June  | 3 72 47   | 126 55 | 48 51   | 55 29   | 140 47  | 66 18  | 87 50   | 120 1  |
| 13    | 82 21     | 132 47 | 63 17   | 72 57   | 142 15  | 78 35  | 89 4    | 119 29 |
| 23    | 91 53     | 138 45 | 82 14   | 92 56   | 143 51  | 90 51  | 90 25   | 118 52 |
| July  | 8 101 26  | 144 40 | 103 48  | 114 20  | 145 37  | 103 4  | 91 42   | 118 26 |
| 18    | 110 57    | 150 50 | 121 13  | 133 20  | 147 31  | 115 27 | 93 00   | 117 54 |
| 28    | 120 31    | 157 00 | 141 42  | 140 18  | 149 29  | 127 45 | 94 13   | 117 22 |
| Aug.  | ■ 130 14  | 163 12 | 159 6   | 162 00  | 151 32  | 140 4  | 95 25   | 116 50 |
| 12    | 230 39    | 169 29 | 180 52  | 170 22  | 153 32  | 152 24 | 96 31   | 116 18 |
| 22    | 140 16    | 175 49 | 172 18  | 171 59R | 155 46  | 164 44 | 97 32   | 115 47 |
| Sep.  | 1 158 55  | 182 13 | 169 11R | 184 37R | 157 57  | 177 3  | 98 25   | 115 14 |
| 11    | 168 37    | 188 44 | 160 14R | 158 32  | 160 8   | 189 23 | 99 12   | 114 43 |
| 21    | 178 23    | 195 17 | 160 40  | 166 10  | 162 16  | 201 41 | 99 51   | 114 12 |
| Oct.  | 1 188 11  | 201 56 | 173 48  | 172 23  | 164 23  | 213 59 | 100 19  | 113 37 |
| 11    | 198 3     | 208 38 | 191 11  | 180 54  | 166 25  | 226 15 | 100 38  | 113 2  |
| ■     | 207 58    | 215 26 | 208 22  | 216 35  | 168 23  | 238 31 | 100 45  | 112 37 |
| 31    | 217 57    | 222 19 | 224 36  | 224 23  | 170 12  | 250 44 | 100 42R | 112 4  |
| Nov.  | 10 227 58 | 229 17 | 240 2   | 247 54  | 171 55  | 263 25 | 100 27  | 111 33 |
| 20    | 237 1     | 235 20 | 258 2   | 261 59  | 173 23  | 275 4  | 100 2   | 111 2  |
| 30    | 248 10    | 243 11 | 268 30  | 274 17  | 174 44  | 287 10 | 99 58   | 110 30 |
| Dec.  | 10 258 19 | 250 40 | 278 8   | 278 37R | 175 51  | 299 10 | 99 40   | 109 52 |
| 20    | 268 30    | 257 57 | 274 30  | 268 2   | 176 41  | 311 3  | 98 00   | 109 26 |
| 30    | 279 42    | 265 19 | 263 25  | 262 57D | 177 15  | 323 41 | 97 12   | 108 54 |

Ayanamsa: 21° 37' 45"

## Longitude of the Moon

| 1944    | Sun.   | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  |        |        |        | 352 37 | 00 26  | 47 9   | 72 54  |
| 9       | 97 48  | 122 1  | 145 45 | 169 21 | 193 19 | 218 12 | 244 35 |
| 23      | 272 45 | 302 25 | 332 00 | 2 17   | 23 31  |        |        |
| Feb. 1  |        | 44 1   | 67 57  | 94 45  | 118 51 | 142 33 | 166 11 |
| 13      | 190 2  | 214 24 | 239 51 | 266 47 | 295 25 | 325 28 | 355 55 |
| 27      | 25 22  | 53 17  |        |        |        |        |        |
| March 1 |        |        |        |        |        | 66 30  | 91 44  |
| 5       | 115 53 | 139 32 | 163 9  | 187 3  | 211 26 | 236 32 | 262 55 |
| 19      | 290 00 | 318 52 | 348 51 | 18 57  | 47 55  | 75 2   | 100 23 |
| April 1 |        |        |        | 112 33 | 136 21 | 159 56 | 183 50 |
| 9       | 208 21 | 233 34 | 259 32 | 286 21 | 314 12 | 341 4  | 12 34  |
| 23      | 41 47  | 69 44  | 95 58  | 122 42 |        |        |        |
| May 1   |        |        |        |        | 144 33 | 168 13 | 192 18 |
| 7       | 217 12 | 243 1  | 269 42 | 297 1  | 324 57 | 353 24 | 22 6   |
| 21      | 24 29  | 77 52  | 103 53 | 128 35 | 152 29 | 176 12 |        |
| June 1  |        |        | 188 13 | 212 52 | 236 39 | 265 15 | 293 25 |
| 11      | 321 44 | 350 9  | 18 25  | 44 15  | 73 20  | 99 54  | 124 25 |
| 25      | 148 32 | 172 15 | 196 9  |        |        |        |        |
| July 1  |        |        |        | 220 51 | 246 50 | 274 16 | 302 53 |
| 9       | 332 2  | 1 1    | 29 16  | 55 22  | 82 51  | 108 13 | 132 47 |
| 23      | 156 45 | 180 26 | 204 18 | 228 56 | 254 52 |        |        |
| Aug. 1  |        | 268 27 | 296 51 | 326 31 | 356 28 | 384 40 | 53 29  |
| 13      | 79 52  | 105 1  | 129 32 | 163 28 | 177 10 | 230 54 | 225 1  |
| 27      | 250 1  | 276 41 | 305 00 |        |        |        |        |
| Sep. 1  |        |        |        |        |        |        | 319 48 |
| 3       | 350 10 | 20 28  | 48 28  | 76 38  | 102 11 | 128 37 | 150 29 |
| 17      | 174 11 | 197 56 | 221 59 | 246 36 | 272 14 | 299 19 | 328 10 |
| Oct. 1  | 358 27 | 28 34  | 58 14  | 85 57  | 111 16 | 135 35 | 150 20 |
| 15      | 183 1  | 206 57 | 231 20 | 256 16 | 282 1  | 308 57 | 337 18 |
| 29      | 6 56   | 37 1   |        |        |        |        |        |
| Nov. 1  |        |        |        |        |        | 51 50  | 80 19  |
| 5       | 106 57 | 131 57 | 155 57 | 179 38 | 203 32 | 228 1  | 253 11 |
| 19      | 279 5  | 305 45 | 333 19 | 1 50   | 31 00  | 60 3   |        |
| Dec. 1  |        |        |        |        |        |        | 1 1    |
| 3       | 114 43 | 139 10 | 163 57 | 187 41 | 211 40 | 236 24 | 262 7  |
| 17      | 288 48 | 316 15 | 344 15 | 12 36  | 40 59  | 69 2   | 96 10  |
| 31      | 122 30 |        |        |        |        |        |        |

Ayanamsha: 21° 37' 45"

## Longitudes of Planets

| 1945  | Sun      | Mars    | Merc.   | Merc.   | Jupit.  | Venus  | Saturn  | Rahu   |
|-------|----------|---------|---------|---------|---------|--------|---------|--------|
| Jan.  | ■ 284 48 | 269 46  | ■ 17    | 268 31  | 177 25  | 329 39 | 96 43R  | 108 35 |
| 15    | ■ 284 59 | 277 8   | 271 30  | 277 ■   | 177 29R | 340 56 | 95 53   | 108 ■  |
| 25    | 305 10   | 284 48  | 284 08  | 291 13  | 177 9R  | 351 50 | 93 11   | 107 31 |
| Feb.  | ■ 315 10 | 292 ■   | 298 38  | 306 25  | 178 38R | 2 11   | 94 35   | 106 59 |
| 14    | ■ 325 26 | 300 ■   | 314 32  | 322 59  | 175 47  | 11 48  | 94 10R  | 106 28 |
| 24    | 335 31   | 307 46  | 331 51  | 341 6   | 174 43  | 20 20  | 93 53   | 105 56 |
| March | 6 345 33 | 315 31  | 350 41  | 0 25    | 173 29  | 27 19  | 93 49D  | 105 24 |
| 16    | 356 33   | 323 16  | 9 48    | 17 59   | 172 12  | 32 2   | 93 55   | 104 53 |
| 26    | 5 ■      | 331 ■   | 24 4    | 27 22   | 170 55  | ■ 34R  | 94 13   | 104 21 |
| April | ■ 15 20  | 338 50  | 27 41R  | 25 27R  | 169 46  | 31 6   | 94 42   | 103 50 |
| 15    | 25 10    | 346 36  | 21 64R  | 18 39R  | 168 47  | 25 28  | 95 18   | 103 17 |
| 25    | 34 55    | 354 20  | 17 00   | 17 5D   | 168 5   | 19 48  | 96 4    | 102 45 |
| May   | 5 ■ 38   | 2 2     | ■ 35    | 23 27   | 167 40  | 17 15R | 97 00   | 102 14 |
| 15    | 54 ■     | 9 41    | 28 39   | 34 1    | 167 31D | 18 35D | 97 59   | 101 41 |
| 25    | 63 55    | 17 17   | 42 24   | 50 47   | 167 42  | 23 1   | 99 9    | 101 10 |
| June  | ■ 73 30  | 24 47   | 60 8    | 70 22   | ■ 9     | 29 39  | 100 16  | 100 38 |
| 14    | 83 4     | 32 13   | 81 11   | 92 8    | 168 54  | 37 47  | 101 30  | 100 6  |
| 24    | 92 37    | 39 ■    | 102 40  | 112 30  | 169 53  | 46 55  | 102 46  | 99 ■   |
| July  | 4 102 9  | 46 ■    | 121 28  | 129 33  | 171 6   | 56 46  | 104 5   | 99 ■   |
| 14    | 111 41   | 53 55   | 136 45  | 143 00  | 172 31  | 67 ■   | 105 22  | 98 31  |
| 24    | 121 14   | 60 46   | 148 11  | 152 3   | 174 6   | 77 52  | 106 40  | 98 ■   |
| Aug.  | ■ 130 47 | 67 33   | 154 26  | 154 40R | 175 50  | 88 56  | 107 55  | 97 28  |
| 13    | 140 23   | 74 10   | 152 47R | 149 2   | 177 41  | 100 15 | 109 6   | 96 56  |
| 23    | 149 59   | 80 34   | 144 51  | 142 13  | 179 ■   | 111 46 | 110 15  | 96 25  |
| Sep.  | 2 159 39 | 86 46   | 142 40D | 146 ■   | 181 41  | 123 29 | 111 18  | 95 52  |
| 12    | 169 22   | 92 43   | 153 13  | 161 38  | 183 47  | 135 21 | 112 15  | 95 20  |
| ■     | 179 7    | 98 20   | 170 47  | 180 00  | 185 55  | 147 22 | 113 ■   | 94 49  |
| Oct.  | 2 188 ■  | 103 35  | 189 58  | 197 37  | 188 6   | 159 31 | 113 47  | 94 14  |
| 12    | 198 ■    | 108 35  | 205 56  | 213 55  | 190 15  | 171 46 | 114 20  | 93 46  |
| 22    | 208 44   | 113 00  | 221 33  | 229 15  | 192 23  | 184 7  | 114 41  | 93 12  |
| Nov.  | 1 218 42 | 116 49  | 236 31  | 243 30  | 194 29  | 196 31 | 114 52  | 92 41  |
| 11    | 228 43   | 119 54  | 250 5   | 255 ■   | 196 ■   | 209 1  | 114 53R | 92 10  |
| 21    | 238 49   | 122 4   | 260 38  | 263 3   | 198 27  | 221 30 | 114 42  | 91 39  |
| Dec.  | 1 248 ■  | 123 9   | 261 ■R  | 256 13  | 200 16  | 234 ■  | 114 20  | 91 6   |
| 11    | 259 6    | 122 56R | 249 52  | 246 ■   | 201 56  | 246 ■  | 113 48  | 91 35  |
| 21    | 269 ■    | 121 19  | 248 12D | 252 16  | 203 27  | 259 12 | 113 8   | 91 2   |
| 31    | 279 27   | 118 27  | 257 53  | 264 20  | 204 ■   | 271 47 | 112 23  | 89 30  |

Ayanamsa: 21° 38' 35"

## Longitude of the Moon

| 1945    | Sun.   | Tue.   | Thurs. | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  |        |        |        |        | 135 9  | 159 42 | 183 36 |
| 7       | 207 24 | 231 4  | 257 6  | 283 50 | 311 49 | 340 33 | 9 21   |
| 21      | 37 44  | 65 22  | 92 1   | 118 7  | 143 15 | 167 39 |        |
| Feb. 1  |        |        | 179 37 | 205 23 | 227 18 | 251 59 | 278 3  |
| 11      | 305 48 | 335 1  | 361 10 | 387 10 | 413 17 | 439 4  | 465 46 |
| 25      | 199 41 | 174 2  |        |        |        |        |        |
| March 1 |        |        | 187 58 | 211 43 | 235 11 | 259 9  | 283 1  |
| 11      | 313 42 | 343 12 | 368 39 | 393 41 | 418 13 | 443 1  | 468 24 |
| 25      | 148 54 | 172 15 | 196 43 | 220 22 |        |        |        |
| April 1 | 232 26 | 256 11 | 281 42 | 305 12 | 329 34 | 353 15 | 377 13 |
| 15      | 68 59  | 94 58  | 121 8  | 146 55 | 169 53 | 193 44 | 217 32 |
| 29      | 241 33 |        |        |        |        |        |        |
| May 1   |        | 286 2  | 311 17 | 337 44 | 363 45 | 389 16 | 415 30 |
| 13      | 75 12  | 103 11 | 129 41 | 154 37 | 178 39 | 202 24 | 226 17 |
| 27      | 250 37 | 275 11 | 301 19 |        |        |        |        |
| June 1  |        |        |        |        |        |        | 314 35 |
| 3       | 341 53 | 10 17  | 39 33  | 64 00  | 97 36  | 124 48 | 150 28 |
| 7       | 174 57 | 198 49 | 222 28 | 246 55 | 272 00 | 298 00 | 324 56 |
| July 1  | 352 41 | 21 1   | 49 40  | 78 11  | 106 3  | 134 51 | 158 25 |
| 15      | 182 55 | 206 48 | 230 38 | 254 3  | 280 30 | 307 12 | 335 2  |
| 29      | 3 20   | 32 5   |        |        |        |        |        |
| Aug. 1  |        |        |        |        |        | 40 17  | 74 18  |
| 11      | 101 41 | 128 18 | 154 1  | 178 49 | 202 52 | 226 36 | 250 37 |
| 19      | 275 34 | 301 58 | 329 57 | 359 5  | 388 57 | 417 11 | 445 55 |
| Sep. 1  |        |        |        | 98 24  | 124 41 | 150 12 | 175 1  |
| 9       | 199 11 | 222 56 | 246 38 | 270 56 | 296 20 | 322 52 | 348 2  |
| 23      | 23 10  | 53 00  | 81 35  | 108 41 |        |        |        |
| Oct. 1  |        |        |        |        | 164 32 | 189 31 | 183 53 |
| 7       | 207 49 | 231 29 | 255 11 | 279 25 | 304 50 | 329 1  | 1 9    |
| 21      | 31 36  | 61 59  | 91 4   | 118 24 | 144 10 | 168 51 |        |
| Nov. 1  |        |        | 180 56 | 204 49 | 228 30 | 252 14 | 276 16 |
| 11      | 301 4  | 327 9  | 354 57 | 381 27 | 408 54 | 436 58 | 464 35 |
| 25      | 140 23 | 165 28 | 189 51 |        |        |        |        |
| Dec. 1  |        |        |        | 213 35 | 237 17 | 261 13 | 285 39 |
| 9       | 310 49 | 337 2  | 363 32 | 388 22 | 413 5  | 438 47 | 463 27 |
| 23      | 148 31 | 173 58 | 198 15 | 221 58 | 245 42 |        |        |

Ayanamsa: 21° 38' 35"

## Longitudes of Planets

|       | 1946 | Sun    | Mars    | Merc.   | Merc.   | Jupit.  | Venus   | Saturn  | Rahu  |
|-------|------|--------|---------|---------|---------|---------|---------|---------|-------|
| Jan.  | 5    | 284 33 | 116 55  | 204 20  | 271 17  | 205 19  | 278 5   | 112 00R | 88 16 |
|       | 15   | 294 11 | 112 41R | 278 35  | 280 7   | 206 15  | 290 39  | 111 10  | 88 43 |
|       | 25   | 304 55 | 108 58  | 293 54  | 301 57  | 206 53  | 303 14  | 110 22  | 88 12 |
| Feb.  | 1    | 315 4  | 106 8   | 310 17  | 318 55  | 207 18  | 315 46  | 109 37  | 87 40 |
|       | 11   | 325 12 | 104 27  | 327 54  | 337 7   | 207 21R | 321 19  | 108 58  | 87 1  |
|       | 24   | 335 17 | 104 8D  | 346 26  | 355 20  | 207 7   | 340 50  | 108 28  | 86 36 |
| March | 6    | 345 19 | 105 2   | 2 59    | 8 13    | 206 32  | 353 19  | 108 8   | 86 5  |
|       | 16   | 355 11 | 106 56  | 10 12   | 8 46R   | 205 43  | 5 46    | 107 58  | 85 11 |
|       | 26   | 5 14   | 109 39  | 5 00R   | 0 52    | 204 38  | 18 12   | 107 59D | 85 1  |
| April | 5    | 15 6   | 113 31  | 358 12  | 357 43D | 203 27  | 25 34   | 108 11  | 84 30 |
|       | 15   | 24 55  | 116 11  | 359 23  | 2 48    | 202 10  | 42 11   | 108 33  | 84 57 |
|       | 25   | 34 41  | 121 11  | 7 36    | 13 33   | 200 55  | 55 10   | 109 7   | 83 25 |
| May   | 5    | 44 24  | 125 50  | 25      | 28 11   | 199 40R | 67 22   | 109 49  | 82 54 |
|       | 15   | 54 1   | 130 44  | 26 47   | 46 12   | 198 46  | 79 31   | 110 38  | 82 23 |
|       | 25   | 63 41  | 135 52  | 56 11   | 67 16   | 198 4   | 91 37   | 111 37  | 81 50 |
| June  | 4    | 73 16  | 141 12  | 78 12   | 88 19   | 197 36  | 103 39  | 112 40  | 81 18 |
|       | 14   | 82 50  | 146 42  | 98 11   | 107 30  | 197 28  | 115 36  | 113 48  | 80 47 |
|       | 24   | 92 23  | 152 21  | 115 22  | 122 12  | 197 35D | 127 27  | 115 00  | 80 15 |
| July  | 4    | 101 55 | 158 9   | 127 54  | 132 20  | 198 1   | 139 11  | 116 15  | 79 43 |
|       | 14   | 111 27 | 164 4   | 135 14  | 136 21R | 198 43  | 150 11  | 117 32  | 79 11 |
|       | 24   | 120 00 | 170 5   | 135 30  | 132 43  | 199 47  | 162 15  | 118 49  | 78 11 |
| Aug.  | 3    | 130 13 | 176 13  | 129 2   | 125 55  | 200 53  | 173 31  | 120 7   | 78 0  |
|       | 13   | 140 8  | 182 22  | 124 54D | 126 47  | 202 17  | 184 31  | 121 22  | 77 35 |
|       | 23   | 149 46 | 188 50  | 131 37  | 128 53  | 203 51  | 195 14  | 122 36  | 77 4  |
| Sep.  | 2    | 159 25 | 195 18  | 147 45  | 157 20  | 205 11  | 205 31  | 123 11  | 76 32 |
|       | 12   | 169 8  | 201 52  | 158 55  | 176 12  | 207 26  | 215 16  | 124 11  | 76 00 |
|       | 22   | 178 58 | 208 31  | 185 00  | 193 14  | 209 24  | 224 12  | 125 51  | 75 29 |
| Oct.  | 2    | 188 42 | 215 17  | 201 40  | 209 24  | 211 27  | 232 3   | 126 44  | 74 57 |
|       | 12   | 198 34 | 222 10  | 216 49  | 220 24  | 213 34  | 238 12  | 127 30  | 74 26 |
|       | 22   | 208 29 | 229 9   | 230 31  | 233 43  | 215 11  | 241 52  | 128 6   | 73 11 |
| Nov.  | 1    | 218 28 | 236 11  | 242 00  | 245 15  | 217 56  | 242 7R  | 128 33  | 73 22 |
|       | 11   | 228 30 | 243 25  | 247 23R | 245 1R  | 220 1   | 250 20  | 128 48  | 72 50 |
|       | 21   | 238 31 | 250 41  | 239 11  | 233 11  | 221 17  | 232 37  | 128 53R | 72 19 |
| Dec.  | 1    | 248 42 | 258 3   | 231 11  | 233 11  | 224 24  | 233 7   | 128 47  | 71 11 |
|       | 11   | 258 51 | 265 31  | 238 15  | 244 27  | 226 28  | 227 19D | 128 11  | 71 15 |
|       | 21   | 269 1  | 273 3   | 251 21  | 258 37  | 228 28  | 230 19  | 128 5   | 70 43 |
|       | 31   | 279 13 | 280 11  | 266 11  | 278 11  | 230 16  | 231 9   | 127 27  | 70 11 |

Ayanamasa: 21° 39' 26"

## Longitude of the Moon

| 1946    | Sun    | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  |        | 237 43 | 238 17 | 307 42 | 334 1  | 1 11   | 29 10  |
| 13      | 57 46  | 86 45  | 113 17 | 142 55 | 169 17 | 184 7  | 218 5  |
| 27      | 241 43 | 266 46 | 290 41 |        |        |        | 303 35 |
| Feb. 1  |        |        |        |        |        |        | 303 35 |
| 3       | 530 18 | 357 53 | 38 1   | 54 34  | 82 25  | 110 19 | 137 42 |
| 17      | 244 12 | 189 36 | 213 58 | 237 42 | 261 26 | 285 55 |        |
| March 1 |        |        |        |        |        |        | 314 42 |
| 3       | 339 2  | 7 33   | 56 33  | 65 13  | 92 11  | 120 28 | 148 59 |
| 17      | 172 48 | 197 47 | 221 46 | 245 39 | 269 21 | 293 47 | 319 37 |
| 31      | 347 54 |        |        |        |        |        |        |
| April 1 |        |        |        |        | 1 40   | 31 17  | 60 58  |
| 7       | 89 48  | 117 24 | 145 53 | 169 28 | 194 17 | 218 29 | 242 13 |
| 21      | 305 49 | 289 47 | 314 18 | 341 11 | 9 53   |        |        |
| May 1   |        |        |        |        |        | 39 45  | 70 1   |
| 5       | 99 24  | 127 22 | 153 42 | 179 2  | 203 25 | 227 18 | 250 46 |
| 19      | 274 37 | 298 43 | 323 44 | 350 11 | 18 21  | 48 3   | 78 24  |
| June 1  |        |        |        | 93 26  | 122 34 | 150 2  | 175 51 |
| 9       | 200 27 | 234 20 | 247 57 | 271 40 | 295 47 | 320 36 | 346 25 |
| 23      | 12 33  | 42 5   | 71 45  | 101 43 |        |        |        |
| July 1  |        |        |        |        | 130 56 | 158 38 | 184 34 |
| 7       | 209 2  | 232 57 | 256 14 | 280 29 | 305 2  | 330 24 | 356 40 |
| 21      | 23 52  | 53 2   | 81 1   | 110 19 | 139 10 | 168 41 |        |
| Aug. 1  |        |        | 179 58 | 205 13 | 232 20 | 252 59 | 278 49 |
| 11      | 301 22 | 326 54 | 353 27 | 20 46  | 48 38  | 76 54  | 106 22 |
| 25      | 133 45 | 161 29 | 188 00 | 213 10 |        |        |        |
| Sep. 1  | 225 19 | 249 6  | 272 47 | 297 3  | 322 28 | 349 12 | 17 1   |
| 15      | 46 21  | 73 41  | 101 52 | 129 41 | 156 58 | 183 56 | 204 52 |
| 29      | 233 18 |        |        |        |        |        |        |
| Oct. 1  |        | 254 18 | 280 38 | 304 55 | 330 28 | 357 37 | 26 10  |
| 13      | 55 22  | 84 14  | 112 43 | 140 10 | 166 44 | 192 28 | 217 20 |
| 27      | 241 28 | 265 6  | 288 43 |        |        |        |        |
| Nov. 1  |        |        |        |        |        |        | 290 42 |
| 3       | 123 27 | 351 44 | 10 47  | 43 11  | 72 18  | 100 45 | 128 57 |
| 17      | 169 48 | 189 23 | 214 5  | 238 9  | 261 59 | 285 24 | 309 16 |
| Dec. 1  | 133 56 | 359 57 | 27 43  | 57 11  | 87 34  | 117 41 | 146 27 |
| 15      | 173 27 | 198 53 | 223 14 | 246 59 | 270 34 | 294 17 | 318 27 |
| 29      | 343 10 | 9 2    |        |        |        |        |        |

Ayanamsa: 21° 39' 26"

## Longitudes of Planets

| 1947  | Sun       | Mars   | Merc.   | Merc.   | Jupit.  | Venus  | Saturn  | Rahu  |
|-------|-----------|--------|---------|---------|---------|--------|---------|-------|
| Jan.  | 5 284 18  | 284 31 | 273 43  | 281 ■   | 231 9   | 239 51 | 127 4R  | 68 56 |
|       | 15 294 30 | 292 15 | 289 30  | 297 37  | 232 46  | 248 20 | 126 19  | 69 26 |
|       | 25 304 41 | 300 1  | 306 7   | 314 48  | 234 11  | 257 53 | 125 30  | 68 51 |
| Feb.  | 4 314 50  | 307 50 | 323 40  | 332 31  | 235 24  | 268 10 | 124 40  | 68 20 |
|       | 14 324 57 | 315 41 | 340 ■   | 347 57  | 236 22  | 278 56 | 123 55  | 67 49 |
|       | 24 335 2  | 323 33 | 352 17  | 352 52R | 237 ■   | 290 5  | 123 14  | 67 16 |
| March | 6 345 5   | 331 26 | 349 49R | 344 58  | 237 28  | 301 29 | 122 41  | 66 45 |
|       | 16 355 4  | 339 18 | 340 57  | 339 14  | 237 34R | 313 ■  | 122 15  | 66 14 |
|       | 26 5 00   | 347 9  | 340 1D  | 342 48  | 237 21  | 324 47 | 122 1   | 65 42 |
| April | 5 14 52   | 355 00 | 347 7   | 352 37  | 236 49  | 336 37 | 121 57D | 65 10 |
|       | 15 24 41  | 2 45   | 359 ■   | 6 22    | 236 2   | 348 30 | 122 4   | 64 38 |
|       | 25 34 27  | 10 29  | 14 17   | 23 00   | 235 00  | 0 27   | 122 22  | 64 6  |
| May   | ■ 44 10   | 18 9   | 32 26   | 42 35   | 233 48  | 12 26  | 122 50  | 63 35 |
|       | 15 53 50  | 25 45  | 53 18   | 64 13   | 232 33  | 24 28  | 123 28  | 62 56 |
|       | 25 63 28  | 33 15  | 74 46   | ■ 31    | 231 18  | 36 31  | 124 14  | 62 31 |
| June  | ■ 73 3    | 40 40  | 93 12   | 100 43  | 230 8   | 48 36  | 125 7   | 61 58 |
|       | 14 82 37  | 48 1   | 107 00  | 111 54  | 229 9   | 60 43  | 126 ■   | 61 27 |
|       | 24 92 ■   | 55 15  | 115 18  | 117 00  | 228 23  | 72 52  | 127 13  | 60 55 |
| July  | ■ 101 41  | 62 23  | 116 45R | 114 44  | 227 54R | 85 ■   | 128 24  | 60 23 |
|       | 14 111 13 | 69 24  | 111 39  | 108 40  | 227 42  | 97 15  | 129 30  | 59 52 |
|       | 24 120 46 | 76 18  | 107 7   | 107 49D | 227 48D | 109 30 | 130 52  | 59 20 |
| Aug.  | 3 130 20  | 83 5   | 111 3   | 110 45  | 228 12  | 121 47 | 132 8   | 58 48 |
|       | 13 139 55 | 89 45  | 124 3   | 133 50  | 228 54  | 134 7  | 133 26  | 58 16 |
|       | 23 149 32 | 96 17  | 143 46  | 153 43  | 229 50  | 146 28 | 134 43  | 57 45 |
| Sep.  | 2 159 11  | 102 39 | 163 18  | 172 26  | 231 2   | 158 49 | 135 57  | 57 11 |
|       | 12 168 53 | 108 53 | 181 3   | 180 14  | 232 26  | 171 17 | 137 8   | 56 42 |
|       | 22 178 39 | 114 56 | 196 57  | 204 16  | 234 00  | 183 44 | 138 15  | 56 9  |
| Oct.  | 2 188 27  | 120 49 | 211 9   | 217 29  | 235 46  | 196 11 | 139 17  | 55 35 |
|       | 12 198 19 | 126 28 | 223 9   | 227 47  | 237 39  | 208 39 | 140 14  | 55 5  |
|       | 22 208 14 | 131 53 | 230 48  | 231 13R | 239 53  | 221 7  | 141 2   | 54 34 |
| Nov.  | 1 218 13  | 137 00 | 229 2R  | 223 15  | 241 45  | 233 37 | 141 41  | 54 1  |
|       | 11 228 15 | 141 47 | 216 42  | 215 41D | 243 55  | 246 5  | 142 11  | 53 28 |
|       | 21 238 20 | 146 8  | 218 48  | 224 22D | 246 ■   | 258 33 | 142 31  | 52 58 |
| Dec.  | 1 248 27  | 150 00 | 231 9   | 238 28  | 248 23  | 271 2  | 142 39  | 52 27 |
|       | 11 258 36 | 153 14 | 246 1   | 253 42  | 250 37  | 283 28 | 142 38R | 51 55 |
|       | 21 268 46 | 165 41 | 261 26  | 269 16  | 252 49  | 295 54 | 142 24  | 51 22 |
|       | 31 278 57 | 157 12 | 277 11  | 285 14  | 255 00  | 308 18 | 142 2   | 50 51 |

Ayanamsa: 21° 40' 16"



## Longitude of the Moon

| 1947    | Sun.   | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  |        |        |        |        |        | 22 29  | 50 37  |
| 5       | 80 15  | 110 37 | 140 30 | 168 50 | 195 14 | 220 3  | 243 55 |
| 19      | 267 28 | 291 11 | 315 23 | 340 15 | 5 51   | 32 23  | 60 ■   |
| Feb. 1  |        |        |        | 74 24  | 103 49 | 133 39 | 162 46 |
| 9       | 190 18 | 216 2  | 240 22 | 264 1  | 287 40 | 311 52 | 336 53 |
| 23      | 2 45   | 29 22  | 56 40  |        |        |        |        |
| March 1 |        |        |        | 84 41  | 113 22 | 142 20 | 170 50 |
| ■       | 198 6  | 223 50 | 248 15 | 271 58 | 295 42 | 320 5  | 345 32 |
| 23      | 12 5   | 39 31  | 67 27  | 95 38  | 123 54 |        |        |
| April 1 |        | 138 1  | 165 56 | 193 5  | 219 7  | 245 58 | 267 57 |
| 13      | 291 38 | 315 40 | 340 41 | 7 3    | 34 44  | 63 20  | 92 11  |
| 27      | 120 45 | 148 42 |        |        |        |        |        |
| May 1   |        |        | 175 53 | 202 11 | 227 34 | 252 5  | 275 59 |
| 11      | 299 40 | 323 42 | 348 40 | 15 6   | 43 7   | 72 24  | 102 5  |
| 25      | 131 15 | 159 19 | 186 5  | 211 44 |        |        |        |
| June 1  | 224 3  | 248 38 | 272 33 | 296 14 | 320 3  | 344 27 | 9 58   |
| 15      | 37 5   | 65 55  | 95 59  | 120 10 | 155 21 | 182 52 | 208 48 |
| 29      | 233 33 |        |        |        |        |        |        |
| July 1  |        | 257 36 | 281 20 | 305 2  | 328 58 | 353 27 | 18 53  |
| 13      | 45 46  | 74 20  | 104 22 | 134 50 | 164 24 | 192 10 | 218 ■  |
| 27      | 242 41 | 266 32 | 290 12 |        |        |        |        |
| Aug. 1  |        |        |        |        |        |        | 302 ■  |
| 3       | 326 3  | 350 30 | 15 37  | 41 43  | 69 9   | 98 5   | 128 8  |
| 17      | 158 11 | 187 00 | 213 57 | 239 12 | 263 19 | 287 00 | 310 48 |
| 31      | 335 5  |        |        |        |        |        |        |
| Sep. 1  |        |        |        |        | 347 27 | 12 41  | 38 39  |
| 7       | 65 30  | 93 26  | 122 25 | 151 56 | 181 2  | 208 47 | 234 51 |
| 21      | 259 31 | 283 23 | 307 8  | 331 19 | 356 18 |        |        |
| Oct. 1  |        |        |        |        |        | 22 10  | 48 50  |
| 5       | 76 12  | 104 12 | 132 42 | 161 22 | 189 36 | 216 49 | 242 42 |
| 19      | 267 22 | 291 17 | 315 3  | 339 19 | 4 33   | 30 58  | 58 29  |
| Nov. 1  |        |        |        | 72 33  | 100 58 | 129 27 | 157 39 |
| 9       | 185 18 | 212 11 | 238 7  | 263 5  | 287 14 | 311 00 | 334 53 |
| 23      | 359 32 | 25 28  | 52 57  | 81 45  |        |        |        |
| Dec. 1  |        |        |        |        | 111 8  | 140 15 | 168 27 |
| 7       | 195 32 | 221 37 | 246 51 | 271 24 | 295 25 | 319 8  | 342 58 |
| 21      | 7 27   | 33 12  | 60 43  | 89 58  | 120 12 | 150 8  |        |

Ayanamsa: 21° 40' 16"

## Longitudes of Planets

| 1948  | Sun       | Mars    | Merc.   | Merc.   | Jupit.  | Venus  | Saturn  | Rahu  |
|-------|-----------|---------|---------|---------|---------|--------|---------|-------|
| Jan.  | 5 284 ■   | 157 33  | 285 14  | 293 27  | 209 6   | 314 29 | 141 44R | 50 36 |
|       | 15 204 15 | 157 20R | 301 40  | 310 17  | 258 10  | 328 ■  | 141 7   | 50 8  |
|       | 26 304 26 | 155 ■   | 318 41  | 320 31  | 260 ■   | 339 ■  | 140 24  | 49 32 |
| Feb.  | ■ 314 35  | 152 54  | 332 40  | ■ 15    | 261 58  | 351 13 | 139 37R | 49 00 |
|       | 14 324 43 | 149 11  | 335 30R | ■ ■     | 263 40  | 3 15   | 138 48  | 48 30 |
|       | 24 334 48 | 145 15  | 325 42R | 322 16  | 263 10  | 15 ■   | 138 ■   | 47 57 |
| March | ■ 344 ■   | 141 48R | 321 40D | 323 34  | 266 27  | 26 48  | 137 18R | 47 ■  |
|       | 15 ■ 40   | 139 21  | 327 17  | 332 19  | 267 29  | 38 12  | 136 42  | 46 54 |
|       | ■ 4 45    | 138 12  | 338 19  | ■ 6     | 268 16  | 40 17  | 136 14  | 44 21 |
| April | ■ 14 38   | 138 19D | 352 34  | 0 41    | 268 40  | 50 58  | 135 55  | 45 50 |
|       | 14 24 27  | 139 34  | 9 25    | 18 48   | 268 57  | 70 7   | 135 46  | 45 18 |
|       | 24 34 13  | 141 45  | 28 49   | 39 23   | 268 49  | 70 30  | 135 48  | 44 48 |
| May   | ■ 43 50   | 144 42  | 50 10   | 60 37   | 268 23  | 87 52  | 136 1   | 44 14 |
|       | 14 53 36  | 148 17  | 70 12   | 78 33   | 267 40  | 94 45  | 136 25  | 43 43 |
|       | 24 63 13  | 152 21  | 85 32   | 91 ■    | 266 42  | 120 29 | 136 58  | 42 11 |
| June  | 3 72 48   | 156 51  | 94 52   | 90 55   | 265 33R | 101 ■  | 137 49  | 42 40 |
|       | 13 82 23  | 161 42  | 97 7R   | 95 34   | 264 17  | 99 00R | 138 30  | 42 8  |
|       | ■ 91 55   | 166 51  | 92 52   | 90 6    | 263 31  | 93 35  | 139 23  | 41 36 |
| July  | 3 101 27  | 172 14  | 88 29   | 88 41D  | 261 49R | 87 47  | 140 29  | 41 4  |
|       | 13 111 00 | 177 51  | 91 00   | 95 29   | 260 47  | 84 47  | 141 37  | 40 31 |
|       | 23 120 32 | 183 40  | 102 00  | 110 15  | 259 57  | 85 37  | 142 48  | 40 00 |
| Aug.  | 2 130 0   | 189 40  | 119 51  | 130 6   | 259 24  | 89 41  | 144 00  | 39 23 |
|       | 12 139 41 | 195 50  | 140 22  | 150 15  | 259 8   | 90 8   | 145 18  | 38 56 |
|       | 22 149 18 | 202 10  | 159 36  | 168 22  | 259 10D | 104 00 | 146 34  | 38 24 |
| Sep.  | 1 158 57  | 208 38  | 176 37  | 184 19  | 259 31  | 113 5  | 147 50  | 37 52 |
|       | 11 168 39 | 215 15  | 191 31  | 198 0   | 260 10  | 122 57 | 149 5   | 37 20 |
|       | 21 178 24 | 222 39  | 204 8   | 209 11  | 261 5   | 133 28 | 150 16  | 36 41 |
| Oct.  | 1 ■ 13    | 228 54  | 213 11  | 215 16  | 262 16  | 144 22 | 151 26  | 36 17 |
|       | 11 108 5  | 235 55  | 214 38R | 210 42R | 263 41  | 155 40 | 152 29  | 35 11 |
|       | 21 208 00 | 243 4   | 204 43  | 200 22  | 265 17  | 167 15 | 153 27  | 35 15 |
|       | 31 217 50 | 250 10  | 200 22D | 204 18  | 267 8   | 179 ■  | 154 15  | 34 41 |
| Nov.  | 10 228 00 | 257 41  | 210 34  | 217 53  | 269 00  | 191 4  | 155 1   | 34 10 |
|       | 20 238 8  | 265 9   | 225 38  | 233 30  | 271 3   | 203 13 | 155 35  | 33 39 |
|       | 30 248 12 | 272 43  | 241 22  | 249 13  | 273 11  | 215 29 | 155 ■   | 33 7  |
| Dec.  | 10 ■ 21   | 280 18  | 257 4   | ■ 56    | 275 25  | 227 49 | 156 11  | 32 34 |
|       | 20 268 31 | 288 8   | 272 52  | 280 51  | 277 43  | 240 14 | 156 12R | 31 4  |
|       | 30 278 43 | 295 54  | ■ 55    | 298 37  | 280 2   | ■ 40   | 156 57  | 31 32 |

Ayanamsa : 21° 41' 06"

## Longitude of the Moon

| 1948    | Sun.   | Tue.   | Thurs. | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  |        |        | 154 39 | 192 22 | 212 41 | 243 45 | 288 9  |
| 11      | 292 7  | 315 52 | 339 37 | 3 41   | 22 34  | 54 51  | 83 2   |
| 25      | 112 59 | 143 41 | 173 40 | 201 53 |        |        |        |
| Feb. 1  | 215 16 | 240 49 | 263 12 | 282 2  | 312 51 | 334 39 | 0 42   |
| 15      | 53 14  | 59 42  | 77 55  | 99 13  | 136 22 | 168 52 | 196 19 |
| 29      | 223 53 |        |        |        |        |        |        |
| March 1 |        |        |        |        | 236 53 | 261 57 | 286 1  |
| 7       | 309 45 | 333 11 | 357 41 | 22 20  | 47 41  | 73 53  | 101 31 |
| 21      | 130 23 | 160 9  | 189 47 | 218 14 | 245 1  | 270 14 |        |
| April 1 |        |        | 224 24 | 244 17 | 330 2  | 341 9  | 18 56  |
| 11      | 44 30  | 70 56  | 98 14  | 126 21 | 155 7  | 181 1  | 212 11 |
| 25      | 239 43 | 265 37 | 290 20 |        |        |        |        |
| May 1   |        |        |        | 314 17 | 338 5  | 2 19   | 27 26  |
| 9       | 53 39  | 80 56  | 108 59 | 137 24 | 161 50 | 193 55 | 221 24 |
| 23      | 248 1  | 273 36 | 298 14 | 322 12 | 346 00 |        |        |
| June 1  |        | 353 1  | 22 41  | 48 41  | 76 7   | 104 44 | 133 50 |
| 13      | 162 28 | 190 40 | 217 47 | 244 4  | 269 33 | 294 11 | 318 24 |
| 27      | 342 10 | 6 3    |        |        |        |        |        |
| July 1  |        |        | 30 42  | 56 44  | 84 32  | 113 51 | 143 46 |
| 11      | 173 8  | 201 14 | 228 1  | 253 43 | 278 39 | 303 00 | 326 56 |
| 25      | 350 38 | 14 29  | 39 3   | 64 59  |        |        |        |
| Aug. 1  | 78 38  | 107 24 | 137 35 | 167 56 | 197 11 | 224 45 | 250 47 |
| 15      | 275 43 | 299 59 | 323 52 | 347 36 | 11 23  | 35 35  | 60 43  |
| 29      | 87 22  | 115 53 |        |        |        |        |        |
| Sep. 1  |        |        |        |        |        | 130 47 | 161 16 |
| 5       | 191 28 | 220 15 | 247 13 | 272 37 | 297 1  | 320 11 | 344 37 |
| 19      | 8 28   | 32 40  | 57 32  | 83 27  | 110 47 | 139 40 |        |
| Oct. 1  |        |        |        |        |        |        | 169 11 |
| 8       | 199 37 | 228 30 | 255 11 | 281 16 | 305 41 | 329 29 | 353 14 |
| 17      | 17 18  | 41 57  | 67 22  | 93 42  | 121 4  | 149 28 | 178 37 |
| 31      | 207 53 |        |        |        |        |        |        |
| Nov. 1  |        |        |        |        | 222 17 | 250 13 | 276 39 |
| 7       | 301 41 | 325 46 | 349 29 | 13 26  | 38 7   | 63 47  | 90 28  |
| 21      | 117 57 | 146 00 | 174 21 | 202 45 | 230 51 |        |        |
| Dec. 1  |        |        |        |        |        | 258 13 | 284 28 |
| 5       | 309 30 | 333 36 | 357 17 | 21 15  | 46 8   | 72 20  | 99 53  |
| 19      | 128 19 | 156 53 | 185 17 | 213 4  | 240 18 | 266 51 | 292 36 |

Ayanamsa: 21° 41' 06"

## Longitudes of Planets

| 1949  | Sun       | Mars.  | Merc.  | Moro.   | Jupit. | Venus  | Saturn  | Rahu  |
|-------|-----------|--------|--------|---------|--------|--------|---------|-------|
| Jan.  | 5 284 50  | 300 34 | 298 37 | 300 25  | 281 25 | 260 10 | 155 50R | 31 13 |
|       | 15 295 1  | 308 28 | 313 26 | 318 32  | 283 44 | 272 40 | 155 25  | 30 41 |
|       | 25 305 12 | 316 21 | 320 9R | 317 34  | 285 00 | 285 9  | 154 50  | 30 8  |
| Feb.  | 4 315 21  | 324 16 | 311 28 | 300 30  | 288 13 | 297 39 | 154 8R  | 29 36 |
|       | 14 325 29 | 333 11 | 304 35 | 305 39D | 290 23 | 310 9  | 153 22  | 29 3  |
|       | 24 335 34 | 340 5  | 308 55 | 313 38  | 292 26 | 322 37 | 152 38  | 28 34 |
| March | 4 345 34  | 347 57 | 319 23 | 325 55  | 294 21 | 335 7  | 151 46  | 28 3  |
|       | 16 355 35 | 355 47 | 333 4  | 340 47  | 296 8  | 347 34 | 151 8   | 27 30 |
|       | 26 5 31   | 3 33   | 349 3  | 357 51  | 297 44 | 0 1    | 150 25  | 26 58 |
| April | 5 15 23   | 11 27  | 7 15   | 17 13   | 299 08 | 12 25  | 149 54  | 26 27 |
|       | 15 25 12  | 18 56  | 27 38  | 38 10   | 300 18 | 24 49  | 149 32  | 25 55 |
|       | 25 34 57  | 26 32  | 38 18  | 57 23   | 301 12 | 37 10  | 149 21  | 25 23 |
| May   | 5 44 40   | 34 2   | 65 00  | 70 53   | 301 49 | 49 30  | 149 19D | 24 53 |
|       | 15 54 20  | 41 27  | 74 53  | 76 57   | 302 8  | 61 49  | 149 29  | 24 20 |
|       | 25 63 57  | 48 48  | 77 00R | 75 19R  | 302 9R | 74 7   | 149 49  | 23 47 |
| June  | 4 73 32   | 56 2   | 72 34  | 70 8    | 301 50 | 86 23  | 150 19  | 23 17 |
|       | 14 83 6   | 63 11  | 68 45  | 69 8D   | 301 13 | 98 34  | 150 57  | 22 44 |
|       | 24 92 39  | 70 14  | 71 27  | 75 35   | 300 21 | 110 51 | 151 43  | 22 12 |
| July  | 4 102 11  | 77 12  | 81 27  | 88 57   | 299 14 | 123 4  | 152 34  | 21 40 |
|       | 14 111 43 | 84 11  | 97 52  | 107 54  | 299 00 | 135 14 | 153 11  | 21 9  |
|       | 24 121 15 | 90 51  | 118 28 | 108 58  | 298 44 | 147 23 | 154 43  | 20 37 |
| Aug.  | 3 130 49  | 97 32  | 139 00 | 148 25  | 295 29 | 159 00 | 155 53  | 20 5  |
|       | 13 140 24 | 104 8  | 157 11 | 165 20  | 294 21 | 171 34 | 157 8   | 19 34 |
|       | 23 150 2  | 110 38 | 172 53 | 179 48  | 293 25 | 183 34 | 158 20  | 19 2  |
| Sep.  | 2 159 41  | 117 2  | 184 50 | 191 24  | 292 47 | 195 31 | 159 35  | 18 29 |
|       | 12 169 23 | 123 20 | 195 51 | 198 25  | 292 25 | 207 23 | 160 51  | 17 58 |
|       | 22 179 9  | 129 31 | 199 0R | 196 44  | 292 21 | 219 10 | 162 5   | 17 26 |
| Oct.  | 2 188 58  | 135 37 | 191 49 | 188 23  | 292 39 | 230 50 | 163 17  | 16 54 |
|       | 12 198 50 | 141 35 | 193 59 | 185 51D | 293 14 | 242 23 | 164 21  | 16 23 |
|       | 22 208 31 | 147 34 | 191 7  | 198 17  | 294 7  | 253 45 | 165 31  | 15 50 |
| Nov.  | 1 218 44  | 153 4  | 206 16 | 214 26  | 295 17 | 264 52 | 166 30  | 15 20 |
|       | 11 228 46 | 158 34 | 222 35 | 230 34  | 296 42 | 275 40 | 167 22  | 14 34 |
|       | 21 238 51 | 163 52 | 238 37 | 246 29  | 298 19 | 285 56 | 168 11  | 14 18 |
| Dec.  | 1 248 58  | 168 55 | 254 34 | 252 6   | 299 7  | 295 43 | 168 42  | 13 43 |
|       | 11 259 7  | 173 40 | 269 34 | 277 40  | 302 6  | 304 25 | 169 7   | 13 12 |
|       | 21 269 18 | 178 4  | 285 17 | 292 34  | 304 11 | 311 41 | 169 22  | 12 41 |
|       | 31 279 31 | 181 56 | 298 34 | 302 29  | 306 34 | 316 48 | 169 28R | 12 5  |

Ayanamsa: 21° 41' 57"

## Longitude of the Moon

|       | 1949 | Sun.   | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|-------|------|--------|--------|--------|--------|--------|--------|--------|
| Jan.  | 1    |        |        |        | 305 8  | 329 31 | 353 17 | 16 57  |
|       | 9    | 41 14  | 66 49  | 94 7   | 122 59 | 152 33 | 181 46 | 210 00 |
|       | 23   | 237 9  | 263 22 | 288 51 | 313 38 | 337 46 |        |        |
| Feb.  | 1    |        | 349 38 | 13 13  | 37 2   | 61 46  | 88 5   | 116 8  |
|       | 13   | 146 9  | 170 25 | 205 53 | 233 54 | 260 27 | 285 51 | 310 28 |
|       | 27   | 334 32 |        |        |        |        |        |        |
| March | 1    |        | 358 14 | 21 50  | 45 42  | 70 23  | ■ 30   | 124 28 |
|       | 13   | 154 10 | 184 40 | 214 39 | 243 10 | 269 58 | 295 17 | 319 38 |
|       | 27   | 343 26 | 7 2    | 30 45  |        |        |        |        |
| April | 1    |        |        |        |        |        |        | 42 44  |
|       | 5    | 67 11  | 92 37  | 119 26 | 147 51 | 177 37 | 207 50 | 237 22 |
|       | 17   | 265 22 | 291 36 | 316 25 | 340 20 | 3 56   | 57 11  | 51 53  |
| May   | 1    | 78 49  | 102 39 | 129 33 | 157 36 | 186 40 | 216 14 | 245 26 |
|       | 15   | 273 27 | 299 50 | 324 44 | 348 40 | 12 17  | 36 11  | 60 49  |
|       | 29   | 86 03  | 112 54 |        |        |        |        |        |
| June  | 1    |        |        |        |        |        | 126 28 | 154 8  |
|       | 5    | 182 24 | 211 4  | 239 46 | 267 54 | 294 52 | 320 25 | 344 47 |
|       | 19   | 8 30   | 32 15  | 56 42  | 82 17  | 109 6  | 136 51 |        |
| July  | 1    |        |        |        |        |        |        | 165 3  |
|       | 3    | 193 20 | 221 30 | 249 24 | 276 45 | 303 10 | 328 27 | 352 42 |
|       | 17   | 16 24  | 40 10  | 64 43  | 90 38  | 118 3  | 146 38 | 175 36 |
|       | 31   | 204 16 |        |        |        |        |        |        |
| Aug.  | 1    |        |        |        |        | 218 22 | 246 3  | 273 00 |
|       | 7    | 299 10 | 324 27 | 348 53 | 12 40  | 36 16  | 60 19  | 85 31  |
|       | 21   | 112 21 | 140 52 | 170 27 | 200 5  | 228 54 | 256 34 |        |
| Sep.  | 1    |        |        | 269 57 | 295 58 | 321 4  | 345 27 | 9 17   |
|       | 11   | 32 51  | 56 36  | 81 6   | 106 57 | 134 34 | 163 52 | 194 5  |
|       | 25   | 224 2  | 252 47 | 279 56 |        |        |        |        |
| Oct.  | 1    |        |        |        | 305 40 | 330 21 | 354 20 | 18 00  |
|       | 11   | 41 36  | 65 30  | 90 5   | 115 48 | 143 5  | 172 3  | 202 12 |
|       | 23   | 232 29 | 261 42 | 289 10 | 314 55 | 339 23 |        |        |
| Nov.  | 1    |        | 351 20 | 14 57  | 38 35  | 62 34  | 87 6   | 112 26 |
|       | 13   | 138 48 | 166 29 | 195 32 | 225 28 | 255 18 | 283 55 | 310 43 |
|       | 27   | 335 51 | 359 51 |        |        |        |        |        |
| Dec.  | 1    |        |        | 23 26  | 47 11  | 71 30  | 96 36  | 122 29 |
|       | 11   | 149 9  | 176 39 | 205 3  | 234 11 | 263 24 | 291 46 | 318 37 |
|       | 25   | 343 50 | 7 54   | 31 30  | 55 21  |        |        |        |

Ayanamsa: 21° 41' 57"

## Longitudes of Planets

| 1950  | Sun       | Mars    | Merc.  | Merc.   | Jupit.  | Venus   | Saturn  | Rahu   |
|-------|-----------|---------|--------|---------|---------|---------|---------|--------|
| Jan.  | 5 284 35  | 183 48  | 303 11 | 47R     | 307 31  | 318 14  | 169 25R | 11 52  |
|       | 15 294 46 | 186 54  | 299 36 | 293 30  | 309 50  | 318 14R | 169 15  | 11 21  |
|       | 25 304 57 | 189 15  | 289 2  | 288 10D | 312 12  | 314 16  | 168 50  | 10 49  |
| Feb.  | 4 315 6   | 190 41  | 290 17 | 294 20  | 314 36  | 308 17  | 168 17  | 10 17  |
|       | 14 325 14 | 191 00R | 299 39 | 305 49  | 316 58  | 303 54  | 167 37  | 9 46   |
|       | 24 335 19 | 190 5R  | 312 37 | 319 56  | 319 20  | 303 23D | 166 53  | 9 14   |
| March | 6 345 21  | 187 52  | 327 42 | 335 57  | 321 39  | 306 31  | 166 05  | 8 42   |
|       | 16 355 30 | 184 35  | 344 41 | 353 54  | 323 54  | 312 22  | 165 18  | 8 10   |
|       | 26 5 16   | 180 48  | 38     | 13 47   | 326 5   | 320     | 164 34  | 7 38   |
| April | 5 15 8    | 177 5   | 3      | 33 54   | 328 7   | 323 56  | 163 54  | 7 7    |
|       | 15 24 58  | 174 9   | 42 37  | 49 35   | 330     | 338 39  | 163 21  | 6 35   |
|       | 25 34 44  | 172     | 54 27  | 57 3    | 331 47  | 343 58  | 162 56  | 6 4    |
| May   | 5 44      | 172 1D  | 57 20R | 55 43   | 332 21  | 359 40  | 162 41  | 5 32   |
|       | 15 54 6   | 172     | 52 56  | 50 13   | 334 42  | 10 41   | 162 35D | 5 00   |
|       | 25 63 44  | 174 43  | 41     | 48 51   | 335 49  | 21 55   | 162 40  | 4 28   |
| June  | 4 73 19   | 177 30  | 50 53  | 54 37   | 336 39  | 33 20   | 162 56  | 3 55   |
|       | 14 82 53  | 181 00  | 59 53  | 66 32   | 337 12  | 44 53   | 163 21  | 3 24   |
|       | 24 92 25  | 185     | 74 31  | 78      | 337 26  | 56      | 163 56  | 2 53   |
| July  | 4 101 57  | 189 42  | 93 56  | 104 40  | 337 21R | 68 19   | 164 38  | 2 22   |
|       | 14 111    | 194     | 113 23 | 125 38  | 336 58  | 80 10   | 165 29  | 1 50   |
|       | 24 121 2  | 200 3   | 135 12 | 144 3   | 336 16  | 92 6    | 166 26  | 1 17   |
| Aug.  | 4 130 35  | 205 45  | 152 10 | 166 36  | 335 19  | 104 7   | 167     | 0 47   |
|       | 13 140 11 | 211 42  | 161 17 | 172 8   | 334     | 116 14  | 168 35  | 0 14   |
|       | 23 149 48 | 217 53  | 176    | 180 30  | 332 51R | 128 25  | 169 46  | 359 42 |
| Sep.  | 4 159 27  | 224 18  | 188 18 | 181 47R | 331 33  | 140 41  | 170 59  | 359 8  |
|       | 12 169 10 | 230 54  | 178    | 173     | 330 19  | 153 00  | 172 14  | 358 39 |
|       | 22 178    | 237 42  | 169    | 168 2D  | 329 13  | 165 23  | 173 29  | 358 7  |
| Oct.  | 2 188 43  | 244 40  | 170 53 | 176 52  | 328 24  | 177 50  | 174 43  | 357 34 |
|       | 12 198 36 | 251 44  | 184 38 | 193     | 327 51  | 190 19  | 175 56  | 357 3  |
|       | 22 208    | 259 08  | 201 39 | 210 6   | 327     | 202     | 177     | 356 31 |
| Nov.  | 1 218 30  | 266 25  | 218 21 | 226 26  | 327 42D | 215 21  | 178 11  | 356 00 |
|       | 11 228 32 | 273     | 234 20 | 242 7   | 328 8   | 227 53  | 179 11  | 355 27 |
|       | 21 238    | 281     | 249 47 | 257 22  | 328 52  | 240 28  | 180 4   | 354 57 |
| Dec.  | 1 248 43  | 289     | 264 48 | 272 00  | 328 55  | 253 5   | 180 50  | 354 25 |
|       | 11 258 52 | 297 00  | 278    | 284 20  | 331 15  | 265 36  | 181 28  | 353 53 |
|       | 21 269 8  | 304 48  | 287 41 | 287 21R | 332 49  | 278 10  | 181     | 353 21 |
|       | 31 279 14 | 312 39  | 282 26 | 277     | 334 34  | 280 29  | 182 15  | 352 48 |

Ayanamsa: 21° 42' 47"

## Longitude of the Moon

| 1950    | Sun.   | Tue.   | Thurs. | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  | 67 33  | 71 42  | 118 55 | 145 57 | 173 11 | 201 31 | 229 47 |
| 15      | 258 10 | 286 14 | 313 21 | 339 9  | 3 42   | 27 29  | 51 11  |
| 29      | 75 25  | 100 51 |        |        |        |        |        |
| Feb. 1  |        |        |        |        |        | 114 25 | 141 28 |
| 11      | 160 43 | 198 14 | 226 37 | 254 37 | 282 6  | 308 51 | 334 40 |
| 19      | 359 29 | 23 30  | 47 7   | 70 59  | 95 46  |        |        |
| March 1 |        |        |        |        |        | 121 57 | 149 46 |
| 11      | 178 47 | 208 13 | 237 15 | 265 21 | 292 11 | 318 24 | 343 30 |
| 19      | 7 53   | 31 43  | 55 20  | 79 12  | 103 52 | 129 55 | 157 41 |
| April 1 |        |        |        | 172 12 | 202 5  | 232 12 | 261 27 |
| 9       | 289 13 | 315 28 | 340 30 | 44     | 28 11  | 52 9   | 75 55  |
| 23      | 100 11 | 125 23 | 152 00 | 180 21 |        |        |        |
| May 1   |        |        |        |        | 210 14 | 240 44 | 270 22 |
| 7       | 298 40 | 324 57 | 349 48 | 13 11  | 37 23  | 61 11  | 85 2   |
| 21      | 109 31 | 134 49 | 161 17 | 189 15 | 218 43 | 249 2  |        |
| June 1  |        |        | 264 5  | 293 22 | 320 47 | 346 22 | 10 39  |
| 11      | 34 19  | 57 59  | 82 00  | 106 11 | 131 53 | 157 58 | 185 11 |
| 25      | 213 25 | 242 50 | 272 35 |        |        |        |        |
| July 1  |        |        |        | 301 35 | 328 59 | 354 38 | 18 59  |
| 11      | 42 42  | 66 27  | 90 44  | 115 49 | 141 42 | 168 21 | 195 11 |
| 23      | 223 11 | 252 42 | 281 38 | 309 58 | 337 00 |        |        |
| Aug. 1  |        | 349 58 | 14 53  | 38 53  | 62 37  | 86 42  | 111 40 |
| 13      | 137 41 | 164 44 | 192 30 | 220 43 | 249 7  | 277 25 | 305 14 |
| 27      | 332 11 | 358 2  | 22 47  |        |        |        |        |
| Sep. 1  |        |        |        |        |        |        | 11 51  |
| 3       | 58 38  | 82 29  | 107 11 | 132 43 | 159 48 | 188 11 | 216 59 |
| 17      | 245 52 | 274 12 | 301 42 | 328 17 | 353 58 | 18 48  | 42 56  |
| Oct. 1  | 66 42  | 90 31  | 114 57 | 140 36 | 167 52 | 196 43 | 226 29 |
| 15      | 256 10 | 284 11 | 312 11 | 338 4  | 3 6    | 27 28  | 51 24  |
| 29      | 75 11  | 98 56  |        |        |        |        |        |
| Nov. 1  |        |        |        |        |        | 111 1  | 135 49 |
| 5       | 162 2  | 190 2  | 219 46 | 250 16 | 280 11 | 308 31 | 335 11 |
| 19      | 0 11   | 24 27  | 48 18  | 72 3   | 95 52  | 119 59 |        |
| Dec. 1  |        |        |        |        |        |        | 144 46 |
| 3       | 170 43 | 198 21 | 227 47 | 258 21 | 288 39 | 317 24 | 344 10 |
| 17      | 9 17   | 33 24  | 57 8   | 80 53  | 104 55 | 129 21 | 158 11 |
| 31      | 180 22 |        |        |        |        |        |        |

Ayanamsa: 21° 42' 47"



## Longitudes of Planets

| 1951  | Sun       | Mars   | Merc.   | Merc.   | Jupit. | Venus   | Saturn  | Rahu   |
|-------|-----------|--------|---------|---------|--------|---------|---------|--------|
| Jan.  | 5 284 20  | 316 35 | 275 59R | 272 17  | 335 34 | 297 1   | 182 19  | 352 11 |
|       | 15 294 31 | 324 27 | 272 28  | 275 31  | 337 33 | 309 34  | 182 21R | 352 1  |
|       | 25 304 42 | 332 19 | 280 16  | 286 7   | 339 42 | 322 4   | 182 12  | 351 30 |
| Feb.  | 4 314 51  | 340 12 | 292 38  | 299 39  | 341 57 | 334 36  | 181 52  | 350 57 |
|       | 14 324 59 | 348 2  | 307 5   | 314 53  | 344 17 | 347 1   | 181 24  | 350 26 |
|       | 24 335 1  | 355 18 | 323 5   | 331 41  | 346 39 | 359 25  | 180 47  | 349 54 |
| March | 6 345 6   | 3 32   | 340 42  | 350 11  | 349 4  | 11 46   | 180 5   | 349 22 |
|       | 16 355 6  | 11 13  | 0 1     | 9 57    | 351 29 | 24 00   | 179 19  | 348 50 |
|       | 26 5 2    | 18 49  | 19 26   | 27 41   | 353 54 | 36 11   | 178 31  | 348 18 |
| April | 5 14 54   | 26 20  | 33 54   | 37 35   | 356 17 | 48 14   | 177 46  | 347 47 |
|       | 15 24 43  | 33 48  | 38 30R  | 37 00   | 358 37 | 60 11   | 177 2   | 347 15 |
|       | 25 34 29  | 41 10  | 33 55   | 30 41   | 0 51   | 71 58   | 176 28  | 346 43 |
| May   | 5 44 12   | 48 26  | 28 42   | 28 31D  | 3 1    | 11 36   | 176 1   | 346 12 |
|       | 15 53 52  | 55 39  | 30 15   | 33 38   | 5 1    | 95 2    | 175 43  | 345 40 |
|       | 25 63 30  | 62 45  | 38 30   | 44 40   | 7 00   | 106 13  | 175 34  | 345 1  |
| June  | 1 73 5    | 69 46  | 51 54   | 60 15   | 8 43   | 117 7   | 175 35D | 344 11 |
|       | 14 82 39  | 76 42  | 69 39   | 70 57   | 10 16  | 127 37  | 175 45  | 344 5  |
|       | 24 92 12  | 83 33  | 90 49   | 101 39  | 11 35  | 137 35  | 176 8   | 343 33 |
| July  | 4 101 44  | 90 21  | 112 4   | 121 44  | 12 40  | 146 49  | 176 37  | 343 00 |
|       | 14 111 16 | 97 1   | 130 36  | 138 39  | 13 29  | 155 1   | 177 16  | 342 30 |
|       | 24 121 48 | 103 43 | 145 54  | 152 15  | 13 59  | 161 53  | 178 1   | 341 8  |
| Aug.  | 3 130 22  | 110 18 | 157 38  | 161 46  | 14 10  | 171 37  | 178 58  | 341 26 |
|       | 13 139 57 | 116 49 | 164 24  | 165 9R  | 14 3R  | 168 20  | 179 58  | 340 54 |
|       | 23 149 34 | 123 15 | 163 29  | 159 45  | 13 34  | 166 19R | 181 2   | 340 23 |
| Sep.  | 2 159 14  | 129 38 | 155 11  | 152 1   | 12 50  | 161 1   | 182 13  | 339 50 |
|       | 12 168 56 | 135 59 | 152 12  | 155 58D | 11 47  | 155 15  | 183 25  | 339 19 |
|       | 22 178 41 | 142 15 | 162 37  | 170 54  | 10 33  | 152 15  | 184 37  | 338 47 |
| Oct.  | 2 188 30  | 148 1  | 179 49  | 188 47  | 9 14   | 153 9D  | 185 52  | 338 12 |
|       | 12 198 21 | 154 36 | 197 32  | 206 1   | 7 54   | 157 23  | 187 6   | 337 43 |
|       | 22 208 17 | 160 40 | 214 12  | 222 10  | 6 41   | 164 00  | 188 17  | 337 11 |
| Nov.  | 1 218 15  | 166 41 | 229 55  | 237 27  | 5 41   | 172 18  | 189 27  | 336 39 |
|       | 11 228 17 | 172 36 | 244 50  | 251 56  | 4 53   | 181 4   | 190 33  | 336 7  |
|       | 21 238 22 | 178 25 | 258 43  | 264 50  | 4 24   | 191 55  | 191 35  | 335 36 |
| Dec.  | 1 248 29  | 184 8  | 269 43  | 272 14  | 4 15D  | 202 43  | 192 30  | 335 4  |
|       | 11 258 38 | 189 42 | 271 50R | 285 14  | 4 28   | 213 58  | 193 17  | 334 33 |
|       | 21 268 48 | 195 9  | 283 55  | 256 5   | 5 00   | 225 31  | 193 57  | 334 02 |
|       | 31 279 00 | 200 24 | 257 18D | 261 10  | 5 51   | 237 18  | 194 27  | 333 29 |

Ayanamsa: 21° 43' 37"

1951 A.D.

# RAMAN'S EPHEMERIS Longitude of the Moon

123

| 1951    | Sun    | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  |        |        |        |        | 193 50 | 221 55 | 251 05 |
| 7       | 281 37 | 311 12 | 339 9  | 5 15   | 29 55  | 53 47  | 77 00  |
| 21      | 101 31 | 126 7  | 151 22 | 177 22 | 204 15 | 232 7  |        |
| Feb. 1  |        |        | 246 55 | 275 35 | 304 48 | 333 12 | 0 10   |
| 11      | 36     | 49 55  | 73 42  | 97 35  | 122 4  | 147 27 | 173 49 |
| 25      | 201 1  | 228 56 |        |        |        |        |        |
| March 1 |        |        | 257 15 | 285 43 | 313 57 | 341 31 | 1 1    |
| 11      | 33 21  | 57 42  | 81 32  | 105 25 | 129 55 | 155 39 | 182 41 |
| 25      | 210 50 | 239 36 | 268 19 | 297 30 |        |        |        |
| April 1 | 310 20 | 337 24 | 3 38   | 2      | 53 37  | 77 36  | 101 21 |
| 15      | 125 26 | 150 28 | 177 1  | 205 13 | 234 38 | 264 18 | 293 14 |
| 29      | 320 55 |        |        |        |        |        |        |
| May 1   |        | 347 25 | 12 55  | 37 49  | 62 8   | 85 57  | 109 08 |
| 13      | 133 40 | 158 35 | 185 3  | 213 25 | 243 20 | 273 42 | 303 11 |
| 27      | 331 5  | 357 24 | 22 32  |        |        |        |        |
| June 1  |        |        |        |        |        |        | 11 49  |
| 11      | 158 55 | 82 49  | 106 32 | 130 22 | 154 45 | 180 16 | 207 00 |
| 17      | 234 24 | 267 3  | 297 28 | 326 55 | 353 53 | 19 11  | 44 1   |
| July 1  | 68 1   | 91 45  | 115 31 | 139 33 | 164 8  | 189 42 | 216 44 |
| 15      | 245 29 | 275 33 | 305 50 | 335 5  | 36 35  | 69 23  | 93 56  |
| 29      | 76 49  | 100 32 |        |        |        |        |        |
| Aug. 1  |        |        |        |        |        | 112 27 | 136 34 |
| 5       | 161 14 | 186 45 | 213 9  | 240 53 | 269 49 | 299 37 | 328 11 |
| 19      | 357 10 | 23 52  | 49 6   | 73 17  | 97 1   | 120 55 | 145 20 |
| Sep. 1  |        |        |        | 157 50 | 183 31 | 210 6  | 237 34 |
| 9       | 265 47 | 294 29 | 323 15 | 351 30 | 18 41  | 44 34  | 69 15  |
| 23      | 93 11  | 118 57 | 141 10 | 166 20 |        |        |        |
| Oct. 1  |        |        |        |        | 192 55 | 220 12 | 248 23 |
| 7       | 276 49 | 305 1  | 333 1  | 0 23   | 26 57  | 52 32  | 77 0   |
| 21      | 101 2  | 124 45 | 148 14 | 174 18 | 201 11 | 229 11 |        |
| Nov. 1  |        |        | 244 1  | 273 14 | 301 56 | 329 47 | 358 45 |
| 11      | 22 58  | 48 27  | 73 10  | 97 14  | 120 53 | 144 40 | 169 16 |
| 25      | 195 22 | 223 19 | 252 51 |        |        |        |        |
| Dec. 1  |        |        |        | 282 53 | 312 15 | 340 10 | 6 57   |
| 11      | 32 11  | 57 30  | 81 49  | 105 41 | 129 18 | 153 1  | 177 33 |
| 23      | 103 27 | 231 15 | 260 53 | 291 24 | 321 24 |        |        |

Ayanamea 21° 43' 37"

## Longitudes of Planets

|       | 1952 | Sun    | Mars    | Merc.   | Merc.   | Jupit. | Venus  | Saturn  | Rahu   |
|-------|------|--------|---------|---------|---------|--------|--------|---------|--------|
| Jan.  | 5    | 244 5  | 202 57  | 201 15  | 266 ■   | 6 27   | 243 15 | 194 39  | 333 14 |
|       | 15   | 294 17 | 208 22  | 272 53  | 279 43  | 7 44   | 255 15 | 194 54  | 332 41 |
|       | 25   | 304 28 | 212 27  | 286 50  | 294 27  | 0 16   | 267 22 | 194 59R | 332 8  |
| Feb.  | 4    | 314 37 | 216 ■   | 302 ■   | 310 24  | 11 1   | 279 33 | 194 52  | 331 37 |
|       | 14   | 324 44 | 220 30  | 318 ■   | 327 46  | 12 56  | 291 47 | 194 36  | 331 7  |
|       | 24   | 334 50 | 223 43  | 336 51  | 346 20  | 14 59  | 304 3  | 194 12  | 330 34 |
| March | 5    | 344 52 | 226 14  | 355 53  | 4 57    | 17 10  | 316 21 | 193 35  | 330 2  |
|       | 15   | 354 51 | 227 53  | ■ ■     | ■ 1     | 19 26  | 328 39 | 192 53  | 329 31 |
|       | 25   | 4 47   | 228 27  | 20 18   | 19 29R  | 21 46  | 340 59 | 192 9   | 328 58 |
| April | 4    | 14 40  | 227 50R | 16 19R  | 12 27   | 24 ■   | 353 17 | 191 23  | 328 27 |
|       | 14   | 24 30  | 225 57  | ■ 36    | ■ 42    | 26 33  | ■ 35   | 190 37  | 327 58 |
|       | 24   | 34 15  | 222 ■   | 9 54D   | 12 54   | 28 58  | 17 ■   | 189 55  | 327 24 |
| May   | ■    | 43 58  | 219 21  | 17 23   | 23 ■    | 31 21  | 30 10  | 189 18  | 326 51 |
|       | 14   | ■ 38   | 215 50  | 29 52   | 37 32   | 33 42  | 42 26  | 188 47  | 326 21 |
|       | 24   | 63 16  | 213 00  | ■ 9     | 55 40   | 36 00  | 54 42  | 188 26  | 325 49 |
| June  | ■    | 72 51  | 211 27  | 66 0    | 76 53   | 38 12  | 66 59  | 188 15  | 325 17 |
|       | 13   | 82 25  | 211 13  | 87 49   | 97 48   | 40 20  | 79 17  | 188 12D | 324 41 |
|       | 23   | 91 ■   | 212 19D | 108 00  | 116 50  | 42 21  | 91 33  | 188 20  | 324 13 |
| July  | 3    | 101 30 | 214 24  | 124 43  | 131 38  | 44 12  | 103 51 | 188 38  | 323 41 |
|       | 13   | 111 ■  | 217 40  | 137 32  | 142 15  | 45 54  | 116 9  | 189 5   | 323 9  |
|       | 23   | 120 34 | 221 36  | 145 32  | 147 ■   | 47 24  | 128 27 | 189 41  | 322 38 |
| Aug.  | 2    | 130 8  | 226 10  | 146 35R | 144 00  | 48 40  | 140 46 | 190 26  | 322 6  |
|       | 12   | 139 43 | 231 18  | 140 7   | 136 30  | 49 41  | 153 6  | 191 17  | 321 34 |
|       | 22   | 149 20 | 236 54  | 134 55  | 136 25D | 50 26  | 165 24 | 192 14  | 321 00 |
| Sep.  | 1    | 158 59 | 242 51  | 141 6   | 148 20  | 50 51  | 177 44 | 193 17  | 320 29 |
|       | 11   | 168 41 | 249 9   | 157 8   | 160 28  | 50 58R | 190 4  | 194 23  | 320 00 |
|       | 21   | 178 27 | 255 43  | 175 50  | 184 53  | 50 45  | 202 22 | 195 32  | 319 27 |
| Oct.  | 1    | 188 15 | 262 31  | 193 35  | 201 55  | 50 14  | 214 ■  | 196 45  | 318 55 |
|       | 11   | ■ 7    | 269 31  | 209 56  | 217 38  | 49 20  | 226 54 | 197 59  | 318 24 |
|       | 21   | 208 2  | 276 41  | 225 ■   | 232 14  | 48 15  | 239 8  | 199 12  | 317 52 |
|       | 31   | 218 1  | 284 1   | 239 3   | 245 20  | 47 00  | 251 21 | 200 24  | 317 10 |
| Nov.  | 10   | 228 2  | 291 28  | 250 ■   | 254 56  | 45 38  | 263 31 | 201 35  | 316 48 |
|       | 20   | 238 7  | 290 1   | 256 30R | 254 10  | 44 18  | 275 39 | 202 40  | 316 18 |
|       | 30   | 248 14 | 306 36  | 248 6   | 242 9   | 43 5   | 287 43 | 203 42  | 315 44 |
| Dec.  | 10   | 258 23 | 314 ■   | 240 18D | 242 27  | 42 6   | 299 40 | 204 37  | 315 12 |
|       | 20   | 268 ■  | 321 58  | 247 ■   | 253 9   | 41 24  | 311 31 | 205 27  | 314 40 |
|       | 30   | 278 45 | 329 42  | 250 52  | ■ 26    | 41 1   | 323 10 | 206 9   | 314 10 |

Ayanamsa: 21° 44' 28"

## Longitude of the Moon

| 1952  | Sun. | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|-------|------|--------|--------|--------|--------|--------|--------|
| Jan.  | 1    | 335 11 | 3 32   | 29 37  | 54 33  | 78 46  | 102 35 |
|       | 13   | 126 15 | 150 11 | 174 1  | 190 17 | 225 50 | 254 11 |
|       | 27   | 314 31 | 344 14 | 12 21  |        |        | 284 4  |
| Feb.  | 1    |        |        |        |        |        | 25 43  |
|       | 3    | 51 18  | 75 43  | 99 11  | 123 9  | 146 11 | 171 15 |
|       | 17   | 222 11 | 249 24 | 277 11 | 307 35 | 337 25 | 362 25 |
| March | 1    |        |        | 46 59  | 72 1   | 96 7   | 119 15 |
|       | 9    | 143 33 | 167 54 | 193 5  | 219 9  | 245 7  | 273 55 |
|       | 23   | 331 25 | 0 16   | 28 15  | 54 12  | 80 2   | 107 53 |
| April | 1    |        | 92 11  | 115 11 | 139 40 | 163 53 | 189 6  |
|       | 13   | 242 49 | 270 46 | 298 52 | 327 15 | 355 23 | 383 4  |
|       | 27   | 75 23  | 100 1  |        |        |        | 125 53 |
| May   | 1    |        | 123 11 | 147 11 | 171 50 | 197 21 | 224 20 |
|       | 11   | 252 33 | 281 19 | 309 58 | 338 6  | 367 37 | 396 36 |
|       | 25   | 48 48  | 108 6  | 131 46 | 155 29 | 179 51 | 203 45 |
| June  | 1    | 167 30 | 192 23 | 218 50 | 246 59 | 276 18 | 305 51 |
|       | 15   | 2 35   | 29 21  | 55 13  | 80 16  | 104 35 | 128 21 |
|       | 29   | 175 48 |        |        |        |        | 151 11 |
| July  | 1    |        | 200 38 | 227 1  | 255 15 | 283 58 | 312 7  |
|       | 13   | 12 45  | 39 26  | 64 54  | 91 27  | 117 25 | 143 2  |
|       | 27   | 184 36 | 209 26 | 235 41 |        |        | 261 38 |
| Aug.  | 1    |        |        |        |        |        | 249 27 |
|       | 3    | 278 18 | 308 11 | 338 44 | 368 4  | 398 46 | 428 11 |
|       | 17   | 110 29 | 134 5  | 157 43 | 181 40 | 206 15 | 231 49 |
|       | 31   | 287 7  |        |        |        |        | 258 42 |
| Sep.  | 1    |        |        |        | 301 50 | 331 54 | 361 53 |
|       | 7    | 30 42  | 57 46  | 83 1   | 107 21 | 130 59 | 154 36 |
|       | 21   | 203 20 | 228 49 | 255 13 | 281 50 | 311 10 | 341 10 |
| Oct.  | 1    |        |        |        |        | 340 33 | 370 10 |
|       | 5    | 38 47  | 65 56  | 91 25  | 115 11 | 139 15 | 162 11 |
|       | 19   | 212 35 | 238 47 | 265 45 | 293 20 | 321 28 | 350 4  |
| Nov.  | 1    |        |        | 32 57  | 60 11  | 86 43  | 111 31 |
|       | 9    | 135 22 | 158 59 | 182 5  | 205 11 | 234 37 | 263 3  |
|       | 23   | 318 18 | 346 28 | 374 25 | 402 1  |        | 430 1  |
| Dec.  | 1    |        |        |        | 68 11  | 94 40  | 119 18 |
|       | 7    | 143 9  | 166 45 | 190 52 | 216 6  | 242 52 | 269 59 |
|       | 21   | 328 57 | 357 23 | 385 2  | 411 53 | 438 1  | 464 3  |

Ayanamsa: 21° 44' 28"

## Longitudes of Planets

|       | 1953 | Sun    | Mars.  | Merc.   | Merc.   | Jupit. | Venus  | Saturn  | Rahu   |
|-------|------|--------|--------|---------|---------|--------|--------|---------|--------|
| Jan.  | 5    | 284 52 | 334 20 | 268 26  | 275 53  | 40 58R | 330 2  | 206 29  | 313 50 |
|       | 15   | 295 3  | 342 2  | 283 32  | 291 25  | 41 7D  | 341 15 | 206 55  | 313 20 |
|       | 25   | 305 14 | 349 42 | 299 31  | 307 52  | 41 41  | 352 2  | 207 12  | 312 46 |
| Feb.  | 5    | 315 23 | 357 19 | 316 31  | 325 28  | 42 36  | 2 17   | 207 18  | 312 15 |
|       | 14   | 325 30 | ■ ■    | 334 35  | 343 38  | 43 38  | 11 37  | 207 14R | 311 ■  |
|       | 24   | 335 35 | 12 24  | ■ ■ 1   | 358 40  | 45 00  | 19 52  | 206 58  | 311 12 |
| March | 6    | 345 37 | 19 51  | 2 27    | 2 35R   | 46 35  | 26 24  | 206 33  | 310 40 |
|       | ■    | 355 37 | 27 14  | 359 30  | 355 00  | ■ 21   | 30 29  | 206 1   | 310 7  |
|       | 26   | 5 ■    | 34 32  | 351 19  | ■ ■ 49  | 50 17  | 31 6R  | 205 22  | 309 37 |
| April | 5    | 15 25  | 41 46  | 350 33D | 353 25  | 52 21  | 27 45  | 204 43  | 309 5  |
|       | 15   | 25 14  | 48 55  | 357 44  | 3 13    | 54 31  | 21 ■   | 203 52  | 308 33 |
|       | 25   | 34 ■   | 55 59  | 9 42    | 17 2    | 56 45  | 16 37  | 203 7   | 308 00 |
| May   | 5    | 44 49  | 62 58  | 24 40   | 34 5    | 59 ■   | 15 00D | 202 24  | 307 31 |
|       | 15   | 54 22  | 69 53  | 43 48   | 54 14   | 61 22  | 17 9   | 201 46  | 306 57 |
|       | 25   | 63 59  | 76 41  | 52 7    | 75 31   | 63 43  | 22 13  | 201 15  | 306 25 |
| June  | 5    | 73 34  | 83 31  | 86 23   | 95 52   | 66 ■   | 29 16  | 200 52  | 305 55 |
|       | 14   | 83 8   | 90 14  | 104 18  | 111 40  | 68 22  | 37 38  | 200 37  | 305 22 |
|       | 24   | 92 41  | 96 ■   | 117 53  | 122 50  | 70 40  | 46 59  | 200 33D | 304 50 |
| July  | 4    | 102 13 | 103 25 | 126 21  | 128 11  | 72 52  | 56 57  | 200 38  | 304 20 |
|       | 14   | 111 45 | 110 3  | 128 3R  | 126 3   | 75 00  | 67 27  | 200 53  | 303 48 |
|       | 24   | 121 18 | 116 ■  | 122 47  | 119 ■   | 77 ■   | 78 16  | 201 18  | 303 15 |
| Aug.  | ■    | 130 52 | 123 2  | 117 37  | 118 14D | 78 56  | ■ 24   | 201 51  | 302 43 |
|       | 13   | 140 27 | 111 28 | 121 39  | 127 18  | 80 42  | 100 45 | 202 32  | 302 11 |
|       | ■    | 150 ■  | 135 52 | 125 50  | 145 12  | 82 11  | 112 19 | 203 22  | 301 40 |
| Sep.  | 2    | 159 44 | 142 15 | 154 59  | 164 39  | ■ 11   | 124 4  | 204 17  | 301 5  |
|       | 12   | 169 26 | 148 ■  | 173 56  | 182 46  | 84 47  | 135 ■  | 205 18  | 300 36 |
|       | 22   | 179 11 | 154 ■  | 191 10  | 190 9   | 85 39  | 148 00 | 206 ■   | 300 5  |
| Oct.  | 2    | 189 00 | 161 12 | 206 47  | 214 1   | ■ 13   | 160 10 | 207 33  | 299 ■  |
|       | 12   | 198 ■  | 167 29 | 220 52  | 227 13  | ■ 26   | 172 26 | 208 45  | 299 00 |
|       | 22   | 208 48 | 173 44 | 232 55  | 237 30  | 86 22R | 184 47 | ■ 55    | 298 20 |
| Nov.  | 1    | 218 46 | 179 58 | 240 ■   | 240 18R | 85 ■   | 197 11 | 211 7   | 297 58 |
|       | 11   | 228 48 | 186 10 | 256 10  | ■ 59    | 85 15  | 209 41 | 212 19  | 297 26 |
|       | 21   | 238 53 | 193 20 | 271 11  | ■ 16D   | 84 14  | 222 13 | 213 29  | 296 ■  |
| Dec.  | 1    | 249 00 | 198 22 | 288 11  | 234 00  | 83 2   | 234 45 | 214 ■   | 296 23 |
|       | 11   | 259 10 | 204 33 | 241 15  | 248 26  | 81 42  | 247 19 | 215 38  | 295 51 |
|       | 21   | 269 20 | 210 38 | 256 54  | ■ 00    | 80 22  | 259 54 | 216 35  | 295 18 |
|       | 31   | 279 31 | 216 37 | 271 14  | 279 5   | 79     | 271 14 | 217 25  | 294 ■  |

Ayanamasa: 21° 45' 18"

1953 A.D.

## RAMAN'S EPHEMERIS

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Longitude of the Moon

| 1953    | Sun.   | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  |        |        | 115 19 | 139 19 | 162 56 | 186 40 | 211 11 |
| 11      | 237 5  | 264 41 | 293 50 | 323 43 | 353 17 | 21 45  | 48 53  |
| 25      | 74 47  | 99 43  | 123 57 | 147 11 |        |        |        |
| Feb. 1  | 159 33 | 183 12 | 207 16 | 232 16 | 258 44 | 286 57 | 316 44 |
| 15      | 347 8  | 16 55  | 45 11  | 71 41  | 96 47  | 120 57 | 144 40 |
| March 1 | 168 17 | 192 6  | 216 22 | 241 25 | 267 39 | 295 26 | 324 49 |
| 15      | 355 9  | 25 16  | 53 56  | 81 42  | 105 47 | 129 48 | 153 24 |
| 29      | 177 5  | 201 10 |        |        |        |        |        |
| April 1 |        |        |        |        |        | 213 26 | 238 26 |
| 5       | 264 14 | 291 5  | 319 13 | 348 35 | 18 32  | 47 55  | 75 46  |
| 19      | 101 46 | 126 19 | 150 4  | 173 42 | 197 46 | 222 34 |        |
| May 1   |        |        |        |        |        |        | 248 9  |
| 8       | 274 30 | 301 11 | 329 33 | 358 11 | 27 27  | 56 13  | 83 46  |
| 17      | 109 44 | 134 19 | 158 8  | 181 52 | 206 7  | 231 18 | 257 31 |
| 31      | 114 37 |        |        |        |        |        |        |
| June 1  | 224 3  | 248 38 |        |        | 111 25 | 326 22 | 354 40 |
| 7       | 23 6   | 51 18  | 78 44  | 105 1  | 130 4  | 154 10 | 177 53 |
| 21      | 201 52 | 226 42 | 252 46 | 280 7  | 308 24 |        |        |
| July 1  |        |        |        |        |        | 337 6  | 5 42   |
| 8       | 33 51  | 61 18  | 87 53  | 113 30 | 138 12 | 162 12 | 185 54 |
| 19      | 209 52 | 234 41 | 260 52 | 286 11 | 317 38 | 347 11 | 16 23  |
| Aug. 1  |        |        |        | 30 37  | 58 13  | 84 38  | 110 2  |
| 9       | 134 39 | 158 41 | 182 11 | 206 9  | 230 11 | 255 43 | 282 36 |
| 23      | 311 15 | 341 13 | 11 26  | 40 43  | 68 25  |        |        |
| Sep. 1  |        | 81 39  | 107 1  | 131 37 | 155 34 | 179 17 | 203 00 |
| 13      | 227 00 | 251 40 | 277 30 | 305 11 | 334 11 | 4 47   | 35 9   |
| 27      | 64 6   | 91 7   |        |        |        |        |        |
| Oct. 1  |        |        | 116 28 | 140 44 | 164 29 | 188 10 | 212 2  |
| 11      | 236 16 | 261 5  | 286 51 | 314 2  | 342 52 | 13 1   | 43 21  |
| 25      | 72 31  | 99 46  | 125 14 | 149 28 |        |        |        |
| Nov. 1  | 161 21 | 185 1  | 208 54 | 233 15 | 258 11 | 283 49 | 310 21 |
| 15      | 338 3  | 6 59   | 36 40  | 61 7   | 84 17  | 120 43 | 145 37 |
| 29      | 169 35 |        |        |        |        |        |        |
| Dec. 1  |        | 193 18 | 217 10 | 242 1  | 267 32 | 293 52 | 320 57 |
| 13      | 348 45 | 17 12  | 41 50  | 74 31  | 102 7  | 128 24 | 153 22 |
| 27      | 177 11 | 201 11 | 225 15 |        |        |        |        |

Ayanamasa: 21° 45' 18"

## Longitudes of Planets

| 1954  | Sun       | Mars    | Merc.   | Merc.  | Jupit.  | Venus   | Saturn  | Rahu   |
|-------|-----------|---------|---------|--------|---------|---------|---------|--------|
| Jan.  | 5 284 37  | 219 11  | 279 5   | 287 5  | 78 30R  | 278 47  | 217 43  | 294 30 |
|       | 15 294 49 | 225 30  | 295 18  | 303 18 | 77 32   | 291 21  | 218 26  | 294 00 |
|       | 25 304 59 | 231 19  | 312 18  | 321 1  | 76 51   | 303 55  | 218 53  | 293 26 |
| Feb.  | 1 315 8   | 237 1   | 329 35  | 337 23 | 76 29   | 316 29  | 219 14  | 292 55 |
|       | 14 325 10 | 242 36  | 343 22  | 346 3  | 76 26D  | 329 1   | 219 19  | 292 23 |
|       | 24 335 21 | 248 1   | 344 41R | 340 03 | 76 46   | 341 34  | 219 18R | 291 52 |
| March | 6 345 23  | 253 15  | 335 15  | 332 14 | 77 22   | 354 2   | 219 6R  | 291 20 |
|       | 16 355 22 | 259 14  | 331 48D | 333 53 | 78 17   | 6 29    | 218 43  | 290 49 |
|       | 26 5 18   | 262 54  | 337 37  | 342 39 | 79 27   | 18 53   | 218 12  | 290 17 |
| April | 6 15 10   | 267 12  | 348 43  | 355 35 | 80 52   | 31 15   | 217 35  | 289 45 |
|       | 15 24 59  | 271 00  | 3 10    | 11 27  | 82 27   | 43 34   | 216 53  | 289 13 |
|       | 25 34 45  | 274 13  | 20 24   | 30 4   | 84 13   | 55 49   | 216 7   | 288 42 |
| May   | 1 44 28   | 276 41  | 40 23   | 51 10  | 86 8    | 68 2    | 215 22  | 288 10 |
|       | 15 1 8    | 278 9   | 61 59   | 72 16  | 88 10   | 80 11   | 214 39  | 287 38 |
|       | 25 63 45  | 278 32R | 11 36   | 89 44  | 90 17   | 92 16   | 214 1   | 287 5  |
| June  | 4 73 21   | 277 30  | 11 36   | 102 6  | 92 29   | 104 17  | 213 29  | 286 33 |
|       | 14 82 54  | 275 35  | 106 4   | 108 20 | 94 42   | 116 12  | 213 2   | 286 2  |
|       | 24 92 27  | 272 42  | 108 44R | 107 21 | 100 58  | 127 1   | 212 46  | 285 30 |
| July  | 4 101 59  | 272 40R | 104 40  | 101 38 | 99 15   | 139 11  | 212 37  | 284 51 |
|       | 14 111 31 | 267 10  | 99 38   | 99 31D | 101 30  | 151 11  | 212 41D | 284 27 |
|       | 11 121 1  | 265 47  | 101 11  | 106 11 | 103 11  | 162 42  | 212 54  | 283 55 |
| Aug.  | 3 130 37  | 265 45  | 113 1   | 121 39 | 105 54  | 173 55  | 213 17  | 283 23 |
|       | 11 140 12 | 267 1   | 131 22  | 141 31 | 108 2   | 184 57  | 213 48  | 282 51 |
|       | 23 140 50 | 269 41  | 151 31  | 161 4  | 110 1   | 195 28  | 214 27  | 282 20 |
| Sep.  | 2 159 29  | 273 15  | 170 6   | 178 11 | 111 58  | 205 38  | 215 14  | 281 11 |
|       | 12 169 12 | 277 39  | 186 11  | 194 14 | 113 44  | 215 10  | 216 8   | 281 16 |
|       | 11 178 57 | 282 43  | 201 23  | 207 56 | 115 20  | 223 54  | 217 6   | 280 16 |
| Oct.  | 2 188 46  | 288 19  | 11 54   | 219 2  | 116 46  | 231 24  | 218 11  | 280 12 |
|       | 11 198 11 | 294 10  | 222 52  | 224 43 | 117 57  | 237 00  | 219 17  | 279 40 |
|       | 22 208 33 | 300 38  | 223 33R | 218 55 | 118 11  | 239 56  | 220 28  | 279 1  |
| Nov.  | 1 218 32  | 307 12  | 212 44  | 211 7  | 119 21  | 239 8R  | 221 36  | 278 37 |
|       | 11 228 34 | 314 00  | 210 4D  | 214 32 | 119 54  | 234 42  | 222 11  | 278 6  |
|       | 21 238 38 | 320 57  | 220 53  | 228 7  | 119 55R | 229 20  | 224 1   | 277 34 |
| Dec.  | 1 248 45  | 328 00  | 224 42  | 243 31 | 119 35  | 225 5   | 225 9   | 277 2  |
|       | 11 258 54 | 335 7   | 251 11  | 258 59 | 118 57  | 225 16D | 226 19  | 276 31 |
|       | 21 269 5  | 342 17  | 266 51  | 274 48 | 118 00  | 229 5   | 227 21  | 276 00 |
|       | 31 279 16 | 349 28  | 281 49  | 290 51 | 116 54  | 235 27  | 228 17  | 275 28 |

Ayanamsa: 21° 46' 8"



1954 A.D.

## RAMAN'S EPHEMERIS

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## Longitude of the Moon

| 1954    | Sun.   | Tue.   | Thurs. | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  |        |        |        |        |        |        | 237 24 |
| 3       | 262 58 | 289 39 | 317 17 | 345 31 | 13 57  | 42 13  | 70 5   |
| 17      | 97 17  | 123 33 | 148 51 | 173 15 | 198 7  | 220 55 | 245 23 |
| 31      | 270 30 |        |        |        |        |        |        |
| Feb. 1  |        |        |        |        | 284 10 | 311 55 | 340 54 |
| 7       | 10 13  | 39 3   | 66 46  | 93 40  | 119 56 | 144 56 | 169 20 |
| 21      | 193 18 | 217 4  | 240 53 | 265 15 |        |        |        |
| March 1 |        |        |        |        | 292 1  | 319 57 | 349 31 |
| 7       | 19 42  | 49 17  | 77 18  | 103 52 | 129 11 | 153 53 | 178 1  |
| 21      | 201 53 | 225 11 | 249 11 | 274 14 | 300 13 | 328 1  |        |
| April 1 |        |        | 342 40 | 12 57  | 43 33  | 72 43  | 100 24 |
| 11      | 126 17 | 151 6  | 175 3  | 197 51 | 223 38 | 245 54 | 270 46 |
| 25      | 296 12 | 322 11 | 351 17 |        |        |        |        |
| May 1   |        |        |        | 21 18  | 51 52  | 81 22  | 109 5  |
| 9       | 135 17 | 159 56 | 182 59 | 207 41 | 231 32 | 255 41 | 280 30 |
| 23      | 305 49 | 332 11 | 0 41   | 30 17  | 60 11  |        |        |
| June 1  |        | 75 1   | 103 41 | 130 44 | 156 11 | 181 37 | 204 11 |
| 13      | 228 9  | 254 24 | 277 19 | 303 1  | 329 38 | 356 14 | 25 42  |
| 27      | 54 43  | 83 41  |        |        |        |        |        |
| July 1  |        |        | 111 53 | 138 43 | 164 13 | 188 38 | 212 27 |
| 11      | 236 20 | 260 47 | 286 11 | 312 38 | 340 5  | 3 10   | 36 1   |
| 25      | 11 1   | 93 1   | 120 28 | 146 53 |        |        |        |
| Aug. 1  | 159 41 | 184 28 | 208 30 | 232 11 | 256 23 | 281 27 | 307 14 |
| 15      | 111 54 | 1 20   | 33 10  | 61 47  | 89 50  | 116 27 | 142 40 |
| 29      | 168 1  | 192 11 |        |        |        |        |        |
| Sep. 1  |        |        |        |        |        | 204 11 | 228 23 |
| 5       | 252 10 | 276 52 | 302 29 | 330 5  | 111 11 | 28 15  | 57 15  |
| 19      | 86 16  | 113 23 | 139 20 | 164 28 | 189 5  | 213 1  |        |
| Oct. 1  |        |        |        |        |        |        | 236 43 |
| 3       | 260 27 | 284 48 | 310 11 | 338 5  | 7 31   | 37 54  | 68 1   |
| 17      | 11 28  | 123 29 | 149 6  | 173 48 | 197 58 | 221 47 | 245 26 |
| 31      | 217 14 |        |        |        |        |        |        |
| Nov. 1  |        |        |        |        | 281 16 | 111 7  | 332 39 |
| 7       | 0 48   | 30 15  | 61 11  | 91 13  | 119 24 | 145 49 | 170 59 |
| 21      | 195 1  | 218 47 | 242 13 | 266 19 | 290 24 |        |        |
| Dec. 1  |        |        |        |        |        | 315 37 | 341 52 |
| 5       | 9 48   | 39 7   | 69 10  | 99 11  | 127 42 | 154 3  | 179 35 |
| 19      | 203 43 | 227 21 | 251 6  | 275 14 | 300 00 | 325 56 | 352 4  |

Ayanamasa: 21° 46' 8"

## Longitudes of Planets

| 1955  | Sun       | Mars   | Merc.  | Merc.   | Jupit.  | Venus  | Saturn  | Rahu   |
|-------|-----------|--------|--------|---------|---------|--------|---------|--------|
| Jan.  | 5 284 22  | 353 1  | 290 59 | 299 14  | 116 46  | 239 22 | 228 23  | 275 11 |
|       | 15 294 34 | 0 14   | 307 33 | 315 35  | 114 58R | 248 10 | 229 31  | 274 40 |
|       | 25 304 44 | 7 23   | 322 47 | 327 58  | 113 37  | 257 55 | 230 10  | 274 8  |
| Feb.  | ■ 314 54  | 14 31  | 329 ■■ | 326 50R | 112 24  | 268 21 | 230 40  | 273 36 |
|       | 14 325 1  | 21 36  | 321 20 | 316 29  | 111 21  | 278 45 | 231 00  | 273 4  |
|       | 24 335 6  | ■ 39   | 314 25 | 315 14D | 110 34  | 290 28 | 231 10  | 272 32 |
| March | 6 345 9   | 35 39  | 318 13 | 324 51  | 110 ■   | 301 55 | 231 10R | 272 00 |
|       | 16 355 ■  | 42 36  | 328 19 | 334 45  | 109 54  | 313 33 | 231 00  | 271 30 |
|       | 26 5 ■    | 49 38  | 341 54 | 349 38  | 110 2D  | 325 18 | 230 30  | 270 58 |
| April | 5 14 56   | 56 18  | 357 59 | 8 47    | 110 30  | 337 10 | 230 10  | 270 25 |
|       | 15 24 45  | 63 ■   | 16 27  | 26 36   | 111 15  | 349 4  | 229 35  | 269 53 |
|       | 25 34 30  | 69 47  | 37 12  | 47 52   | 112 16  | 1 3    | 228 56  | 269 21 |
| May   | ■ 44 14   | 76 28  | 58 00  | 67 5    | 113 31  | 13 3   | 228 10  | 268 50 |
|       | 15 53 54  | 83 5   | 74 47  | 80 50   | 115 00  | 25 6   | 227 25  | 268 18 |
|       | 25 63 32  | 89 30  | 85 24  | 88 5    | 116 36  | 36 40  | 226 41  | 267 45 |
| June  | 4 73 7    | 96 12  | ■ 49R  | 87 44   | 118 24  | 49 16  | 226 2   | 267 15 |
|       | 14 82 41  | 102 42 | 85 21  | 82 35   | 120 19  | 61 23  | 225 27  | 266 43 |
|       | 24 92 14  | 109 10 | ■ 37   | 80 16D  | 122 18  | 73 32  | 224 59  | 266 10 |
| July  | 4 101 46  | 115 36 | 81 54  | 85 34   | 124 24  | 85 17  | 224 41  | 265 ■■ |
|       | 14 111 18 | 122 00 | 91 8   | 98 32   | 126 32  | 97 56  | 224 31  | 265 9  |
|       | 24 120 50 | 128 24 | 107 27 | 117 28  | 128 44  | 110 12 | 224 31D | 264 36 |
| Aug.  | 3 130 24  | 134 47 | 127 54 | 138 12  | 130 56  | 122 29 | 224 41  | 264 5  |
|       | 13 139 59 | 141 9  | 148 2  | 157 16  | 133 ■   | 134 49 | 225 1   | 263 31 |
|       | 23 149 36 | 147 31 | 165 54 | 173 57  | 135 18  | 147 11 | 225 31  | 263 00 |
| Sep.  | 2 159 16  | 153 53 | 181 28 | 188 23  | 137 26  | 159 34 | 226 7   | 262 28 |
|       | 12 168 58 | 160 15 | 194 42 | 200 13  | 139 32  | 172 00 | 226 50  | 261 57 |
|       | 22 178 43 | 166 37 | 204 43 | 207 44  | 141 33  | 184 26 | 227 43  | 261 25 |
| Oct.  | 2 188 32  | 173 00 | 208 34 | 206 25R | 143 26  | 196 53 | 228 41  | 260 54 |
|       | 12 198 23 | 179 23 | 201 22 | 195 45  | 145 12  | 209 21 | 229 43  | 260 22 |
|       | 22 208 19 | 185 47 | 193 12 | 195 5D  | 146 49  | 221 50 | 230 48  | 259 49 |
| Nov.  | 1 218 17  | 192 13 | 200 18 | 207 17  | 148 14  | 234 18 | 231 58  | 259 17 |
|       | 11 228 19 | 198 39 | 215 2  | 223 00  | 149 26  | 246 46 | 233 10  | 258 47 |
|       | 21 238 24 | 205 26 | 231 16 | 238 56  | 150 23  | 259 22 | 234 22  | 258 14 |
| Dec.  | 1 248 31  | 211 36 | 246 48 | 254 40  | 151 ■   | 271 41 | 235 33  | 257 42 |
|       | 11 258 40 | 218 6  | 262 26 | 270 18  | 151 25  | 284 7  | 236 43  | 257 11 |
|       | 21 268 50 | 224 36 | 278 20 | 286 17  | 151 29R | 296 33 | 237 48  | 256 39 |
|       | 31 279 1  | 231 7  | 294 7  | 301 37  | 151 45  | 308 56 | 238 50  | 256 6  |

Ayanamsa: 21° 46' 59'

## Longitude of the Moon

| 1955    | Sun.   | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  |        |        |        | 5 46   | 33 58  | 63 1   | 92 27  |
| 9       | 121 23 | 148 34 | 175 8  | 199 52 | 224 46 | 247 24 | 271 30 |
| 23      | 298 22 | 322 14 | 349 2  | 16 2   | 44 37  |        |        |
| Feb. 1  |        | 58 48  | 87 16  | 115 38 | 143 20 | 170 2  | 195 25 |
| 13      | 219 40 | 243 24 | 269 14 | 291 38 | 317 38 | 343 47 | 12 55  |
| 27      | 41 25  |        |        |        |        |        |        |
| March 1 |        | 69 44  | 97 50  | 125 14 | 152 8  | 178 14 | 203 50 |
| 13      | 227 32 | 251 14 | 275 1  | 299 33 | 325 42 | 353 21 | 22 21  |
| 27      | 51 41  | 80 32  | 108 40 |        |        |        |        |
| April 1 |        |        |        |        |        |        | 122 00 |
| 3       | 148 38 | 174 26 | 199 27 | 223 47 | 247 33 | 271 9  | 295 13 |
| 17      | 320 23 | 347 22 | 16 10  | 46 5   | 75 46  | 104 37 | 132 25 |
| May 1   | 158 10 | 183 46 | 208 27 | 232 25 | 256 7  | 279 45 | 303 51 |
| 15      | 328 29 | 355 45 | 24 20  | 54 20  | 84 40  | 114 7  | 142 2  |
| 29      | 168 24 | 193 18 |        |        |        |        |        |
| June 1  |        |        |        |        |        | 205 32 | 229 30 |
| 5       | 253 6  | 276 45 | 300 47 | 325 21 | 351 23 | 18 47  | 47 13  |
| 19      | 77 50  | 107 58 | 136 59 | 164 21 | 190 3  | 214 29 |        |
| July 1  |        |        |        |        |        |        | 238 15 |
| 3       | 261 52 | 285 42 | 310 5  | 335 4  | 2 6    | 28 39  | 57 20  |
| 17      | 86 36  | 116 17 | 145 17 | 172 42 | 198 30 | 222 47 | 246 29 |
| 31      | 270 27 |        |        |        |        |        |        |
| Aug. 1  |        |        |        |        | 282 13 | 306 46 | 331 37 |
| 7       | 358 21 | 25 43  | 53 12  | 81 42  | 110 37 | 139 25 | 167 17 |
| 21      | 193 51 | 218 55 | 242 56 | 266 36 | 290 31 | 315 20 |        |
| Sep. 1  |        |        | 328 11 | 354 44 | 22 9   | 50 4   | 78 14  |
| 11      | 106 28 | 134 37 | 162 17 | 189 1  | 212 32 | 238 55 | 262 18 |
| 25      | 286 20 | 310 51 | 336 27 |        |        |        |        |
| Oct. 1  |        |        |        | 3 5    | 31 53  | 60 36  | 89 10  |
| 9       | 117 15 | 144 48 | 171 40 | 197 41 | 222 43 | 246 55 | 270 34 |
| 23      | 294 14 | 318 37 | 344 21 | 11 47  | 40 41  |        |        |
| Nov. 1  |        | 58 11  | 85 1   | 113 55 | 141 45 | 168 29 | 194 10 |
| 13      | 219 9  | 243 24 | 267 4  | 290 39 | 314 32 | 339 29 | 5 51   |
| 27      | 33 57  | 63 40  |        |        |        |        |        |
| Dec. 1  |        |        | 93 56  | 123 34 | 151 49 | 178 30 | 203 50 |
| 11      | 124 15 | 152 6  | 275 52 | 296 22 | 323 22 | 348 16 | 14 16  |
| 25      | 43 1   | 71 11  | 101 54 | 132 6  |        |        |        |

Ayanamsa: 21° 46' 59"

## Longitudes of Planets

| 1956  | Sun       | Mars    | Merc.   | Merc.   | Jupit.  | Venus  | Saturn  | Rahu   |
|-------|-----------|---------|---------|---------|---------|--------|---------|--------|
| Jan.  | 5 284 7   | 234 23  | 301 37  | 308 9   | 159 58R | 315 7  | 239 20  | 255 52 |
|       | 15 294 19 | 240 11  | 312 32  | 313 5R  | 150 14  | 327 25 | 240 15  | 255 20 |
|       | 25 304 30 | 247 29  | 309 9   | 303 1   | 149 15  | 339 40 | 241 11  | 254 47 |
| Feb.  | ■ 315 39  | 254 11  | 298 39  | 297 40  | 148 3   | 351 48 | 241 41  | 254 17 |
|       | 14 324 46 | 260 36  | 299 32D | 303 23  | 146 46  | 3 48   | 242 12  | 253 45 |
|       | 24 334 52 | 267 10  | 308 31  | 314 34  | 145 27  | 15 38  | 242 35  | 253 13 |
| March | 5 344 54  | 273 44  | 321 16  | 328 35  | 144 14  | 27 16  | 242 47  | 252 43 |
|       | 15 354 53 | 280 16  | 336 25  | 344 45  | 143 11  | 38 36  | 242 45R | 252 11 |
|       | 25 4 49   | 286 47  | 352 36  | 3 00    | 142 19  | 49 38  | 242 41  | 251 36 |
| April | 4 14 42   | 293 15  | 12 56   | 23 17   | 141 46  | 60 13  | 242 22  | 251 5  |
|       | 14 24 31  | 299 41  | 33 42   | 43 38   | 141 31  | 70 12  | 241 55  | 250 33 |
|       | 24 33 19  | 306 3   | 52 21   | 59 27   | 141 34D | 79 24  | 241 21  | 250 00 |
| May   | 4 ■ 00    | 312 18  | 64 30   | 67 49   | 141 56  | 87 28  | 240 41  | 249 29 |
|       | 14 53 40  | 318 27  | 68 52   | 67 56R  | 142 35  | 93 56  | 239 58  | 249 00 |
|       | 24 63 18  | 324 23  | 65 33   | 68 49   | 143 30  | 98 1   | 239 13  | 248 28 |
| June  | 3 72 53   | 330 4   | 60 46   | 60 17D  | 144 39  | 98 52R | 238 30  | 247 54 |
|       | 13 82 27  | 335 29  | 61 40   | 65 41   | 146 00  | 95 49  | 237 49  | 247 22 |
|       | 23 92 00  | 340 29  | 69 44   | 76 10   | 147 32  | 90 3   | 237 14  | 246 51 |
| July  | 3 101 31  | 344 55  | 83 34   | 93 18   | 149 14  | 84 38  | 236 44  | 246 19 |
|       | 13 111 11 | 348 38  | 103 32  | 114 12  | 151 11  | 82 30D | 236 24  | 245 47 |
|       | 23 120 36 | 351 28  | 124 45  | 134 48  | 153 00  | 84 10  | 236 14  | 245 16 |
| Aug.  | ■ 130 10  | 353 12  | 144 11  | 152 54  | 155 11  | 88 51  | 236 10D | 244 43 |
|       | 12 139 45 | 353 38R | 160 58  | 161 22  | 157 8   | 95 39  | 236 17  | 244 11 |
|       | 22 149 22 | 352 45  | 175 6   | 181 11  | 159 15  | 103 54 | 236 35  | 243 40 |
| Sep.  | 1 159 11  | 350 11  | 188 5   | 189 52  | 161 24  | 113 10 | 237 2   | 243 0  |
|       | 11 168 11 | 348 00  | 191 57  | 191 44R | 163 34  | 123 12 | 237 37  | 242 37 |
|       | 21 178 29 | 345 24  | 188 40R | 183 29  | 165 44  | 133 46 | 238 20  | 242 5  |
| Oct.  | 1 188 17  | 343 41  | 178 44  | 177 22D | 167 50  | 144 48 | 239 11  | 241 33 |
|       | 11 198 9  | 343 9D  | 180 11  | 181 2   | 169 54  | 156 10 | 240 5   | 241 2  |
|       | 21 208 4  | 343 57  | 193 43  | 202 55  | 171 54  | 167 47 | 241 7   | 240 30 |
|       | 31 218 8  | 345 56  | 210 16  | 218 11  | 173 46  | 179 38 | 242 12  | 239 57 |
| Nov.  | 10 228 5  | 348 56  | 226 37  | 234 39  | 175 32  | 191 39 | 243 20  | 239 11 |
|       | 20 238 9  | 352 39  | 242 21  | 250 18  | 177 8   | 203 49 | 244 31  | 238 54 |
|       | 30 248 16 | 357 9   | 254 3   | 263 34  | 178 33  | 216 11 | 245 43  | 238 23 |
| Dec.  | 10 258 5  | 2 3     | 273 21  | 280 46  | 179 44  | 228 28 | 246 53  | 237 50 |
|       | 20 268 35 | 7 10    | 287 41  | 293 32  | 180 41  | 240 53 | 248 3   | 237 11 |
|       | 31 277 48 | 13 25   | 297 11  | 295 49R | 181 25  | 253 21 | 249 11  | 236 48 |

Ayanamsa: 21° 47' 49"

## Longitude of the Moon

| 1956    | Sun.   | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  | 146 42 | 174 35 | 206 ■  | 225 15 | 249 7  | 272 44 | 296 22 |
| 15      | 320 16 | 345 6  | 10 36  | 37 21  | 65 18  | 94 48  | 124 58 |
| 29      | 154 42 | 182 52 |        |        |        |        |        |
| Feb. 1  |        |        |        |        |        | 196 12 | 231 43 |
| 5       | 246 51 | 269 27 | 293 6  | 317 14 | 342 10 | 7 39   | 34 00  |
| 19      | 61 15  | 89 29  | 118 40 | 147 38 | 176 58 | 204 7  |        |
| March 1 |        |        | 217 7  | 241 56 | 266 48 | 289 27 | 313 26 |
| 11      | 338 18 | 4 ■    | 30 49  | 58 24  | 86 2   | 114 21 | 142 58 |
| 25      | 171 18 | 198 16 | 224 54 | 249 43 |        |        |        |
| April 1 | 261 46 | 285 28 | 309 16 | 333 51 | 359 34 | 25 16  | 54 24  |
| 15      | 82 46  | 111 9  | 139 22 | 167 11 | 194 14 | 220 22 | 245 27 |
| ■       | 269 37 |        |        |        |        |        |        |
| May 1   |        | 293 23 | 317 12 | 341 47 | 7 39   | 35 00  | 63 38  |
| 13      | 92 40  | 121 53 | 150 12 | 177 32 | 203 53 | 229 16 | 255 52 |
| 27      | 277 51 | 301 ■  | 325 23 |        |        |        |        |
| June 1  |        |        |        |        |        |        | 337 32 |
| ■       | 2 24   | 29 13  | 57 29  | 86 58  | 117 4  | 146 24 | 174 22 |
| 17      | 200 54 | 226 12 | 250 40 | 274 36 | 298 19 | 322 ■  | 346 12 |
| July 1  | 11 14  | 37 38  | 65 45  | 95 28  | 125 54 | 155 46 | 184 4  |
| 15      | 210 34 | 235 37 | 259 46 | 283 ■  | 307 10 | 331 ■  | 355 25 |
| 29      | 20 30  | 46 44  |        |        |        |        |        |
| Aug. 1  |        |        |        |        |        | 60 ■   | 89 4   |
| 5       | 119 5  | 149 32 | 178 ■  | 206 30 | 232 15 | 258 41 | 280 28 |
| 19      | 304 ■  | ■ ■    | 352 25 | 17 33  | 43 22  | 70 19  | 98 20  |
| Sep. 1  |        |        |        | 113 5  | 142 55 | 172 40 | 201 12 |
| ■       | 227 55 | 253 00 | 277 ■  | 300 54 | 324 37 | 349 15 | 14 24  |
| 23      | 40 22  | 67 6   | 94 42  | 123 ■  |        |        |        |
| Oct. 1  |        |        |        |        | 152 12 | 181 11 | 208 46 |
| 7       | 235 51 | 260 58 | 285 5  | 308 50 | 332 49 | 357 35 | 23 20  |
| 21      | 50 4   | 77 35  | 105 36 | 133 57 | 162 19 | 190 21 |        |
| Nov. 1  |        |        | 204 7  | ■ 50   | ■ 25   | 280 57 | 304 44 |
| 11      | 328 25 | 352 55 | 19 21  | 45 7   | 73 7   | 102 21 | 130 42 |
| 25      | 159 5  | 186 44 | 213 32 |        |        |        |        |
| Dec. 1  |        |        |        | 239 29 | ■ 34   | ■ 54   | 312 44 |
| 9       | 336 31 | 0 ■    | ■ 2    | 52 57  | 81 31  | 111 10 | 140 53 |
| ■       | 189 44 | 157 13 | 223 26 | 248 90 | 273 16 |        |        |

Ayanamsa: 21° 47' 49"

## Longitudes of Planets

|       | 1957 | Sun    | Mars.  | Mer.    | Mer.    | Jupit.  | Venus  | Saturn  | Rahu   |
|-------|------|--------|--------|---------|---------|---------|--------|---------|--------|
| Jan.  | 5    | 284 54 | 16 17  | 296 24R | 191 19  | 181 37  | 260 49 | 249 47  | 236 30 |
|       | 15   | 295    | 22     | 284     | 281 24  | 181 47  | 273 19 | 250 47  | 235 57 |
|       | 25   | 303 16 | 28     | 282 6D  | 281 21  | 181 39R | 285 49 | 251 42  | 235 24 |
| Feb.  | 4    | 315 04 | 34 13  | 290 10  | 286 2   | 181 15  | 298 19 | 252     | 234 52 |
|       | 14   | 325 32 | 40     | 290 10  | 286 2   | 180 27  | 310 49 | 253 10  | 234 21 |
|       | 24   | 335 37 | 46 38  | 317 8   | 325 4   | 179 28  | 323 19 | 253 41  | 233 50 |
| March | 4    | 345 40 | 52 51  | 333 27  | 342 17  | 178 18  | 335 47 | 254 3   | 233 18 |
|       | 16   | 355 38 | 59 8   | 351 35  | 1 22    | 177 11  | 348 15 | 254 15  | 232 45 |
|       | 26   | 5 34   | 64 50  | 11      | 21 32   | 175 54  | 0 42   | 254 17R | 232 15 |
| April | 5    | 15 7   | 71 41  | 30      | 38 52   | 174 34  | 13 6   | 254 10  | 231 41 |
|       | 15   | 25 16  | 77 59  | 44 44   | 48 20   | 173 31  | 25 30  | 253 53  | 231 10 |
|       | 25   | 35 1   | 84 15  | 49 27   | 48 44R  | 172 40  | 37 52  | 253 29  | 230 38 |
| May   | 5    | 44 44  | 90 32  | 45 32R  | 42 34   | 172 8   | 50 12  | 252 55  | 230    |
|       | 15   | 54 54  | 96 50  | 40      | 40 7    | 171 52  | 62 31  | 252 16  | 229 35 |
|       | 25   | 64 1   | 103    | 41 35D  | 44 47   | 171 54D | 74 48  | 251 33  | 229 8  |
| June  | 4    | 73 38  | 109 21 | 40      | 53 19   | 172 14  | 87     | 250 50  | 228 31 |
|       | 14   | 83 10  | 115 37 | 63 1    | 71 33   | 172 51  | 99 19  | 250 6   | 228 00 |
|       | 24   | 92 43  | 121 53 | 81 13   | 91 42   | 173 45  | 111 32 | 249 25  | 227    |
| July  | 4    | 102 15 | 128 10 | 102 3   | 113 12  | 174 53  | 123 43 | 248 49  | 226 46 |
|       | 14   | 111 47 | 134 25 | 123 19  | 132 41  | 176 12  | 135    | 248 18  | 226 24 |
|       | 24   | 121 20 | 140 43 | 141 11  | 149 9   | 177 43  | 148 1  | 247 57  | 225 53 |
| Aug.  | 3    | 130 53 | 147 31 | 156 17  | 162 30  | 179 24  | 160 6  | 247 44  | 225 21 |
|       | 13   | 140 28 | 153 11 | 167 50  | 171 58  | 181 11  | 172 10 | 247 41D | 224 48 |
|       | 23   | 150 16 | 160 42 | 174 11  | 175 10R | 183 6   | 184 10 | 247 47  | 224 18 |
| Sep.  | 2    | 159 45 | 166    | 173 19R | 169 13  | 185 1   | 196 6  | 248 3   | 223 46 |
|       | 12   | 169 28 | 172 29 | 164 23  | 161 24  | 187 11  | 207 56 | 248 28  | 223 14 |
|       | 22   | 179 13 | 178 56 | 162 5D  | 159 29  | 189 17  | 219 41 | 249 3   | 222 42 |
| Oct.  | 2    | 189 2  | 185    | 173 29  | 181 48  | 191 27  | 231 19 | 249 45  | 222 10 |
|       | 12   | 198 54 | 191 56 | 190 30  | 199 14  | 193 27  | 242 48 | 250 34  | 221 40 |
|       | 22   | 208 49 | 198    | 207 13  | 216 00  | 195 46  | 254 7  | 251 29  | 221    |
| Nov.  | 1    | 218 48 | 206 6  | 224     | 231 54  | 197 54  | 265 8  | 252 00  | 220 35 |
|       | 11   | 228 54 | 211 46 | 239 38  | 247 13  | 199 58  | 275 50 | 253 34  | 220    |
|       | 21   | 238 55 | 218 28 | 254 38  | 261 52  | 201 55  | 286 5  | 254 43  | 219 31 |
| Dec.  | 1    | 248 2  | 225 11 | 268 45  | 274 54  | 203 49  | 295 31 | 255 52  | 218 59 |
|       | 11   | 259 11 | 232 3  | 279 36  | 281 31  | 205 33  | 305 10 | 257 4   | 218 30 |
|       | 21   | 269 22 | 238 55 | 279 10R | 272 15  | 207 8   | 310 43 | 258 14  | 217 56 |
|       | 31   | 279 33 | 245 51 | 287 15  | 265 14  | 208 31  | 315 9  | 259 23  | 217 24 |

Ayanamasa: 21° 48' 39"

1957 A.D.

## RAMAN'S EPHEMERIS

135

Longitude of the Moon

| 1957    | Sun    | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  |        | 233 20 | 109 14 | 332 58 | 356 48 | 21 21  | 47 10  |
| 13      | 74 46  | 104 16 | 134 46 | 165 3  | 193 1  | 220 24 | 245 51 |
| 27      | 270 14 | 294 11 | 318 58 |        |        |        |        |
| Feb. 1  |        |        |        |        |        |        | 330 50 |
| 11      | 353 39 | 17 50  | 42 28  | 69 14  | 97 1   | 127 26 | 158 1  |
| 17      | 188 9  | 216 12 | 241 27 | 267 15 | 291 14 | 314 57 |        |
| March 1 |        |        |        |        |        |        | 338 45 |
| 11      | 2 46   | 27 14  | 52 26  | 78 57  | 104 36 | 135 1  | 166 11 |
| 17      | 196 12 | 224 23 | 250 53 | 275 50 | 300 51 | 324 35 | 347 27 |
| 31      | 11 49  |        |        |        |        |        |        |
| April 1 |        |        |        |        | 10 10  | 49 29  | 75 2   |
| 7       | 102 48 | 131 1  | 156 11 | 189 42 | 211 28 | 245 42 | 271 28 |
| 21      | 296 1  | 320 25 | 343 44 | 7 11   | 33 1   |        |        |
| May 1   |        |        |        |        |        | 59 2   | 85 47  |
| 11      | 113 38 | 141 57 | 170 27 | 198 59 | 226 53 | 254 43 | 279 52 |
| 19      | 303 55 | 328 51 | 351 41 | 16 2   | 41 24  | 68 5   | 95 49  |
| June 1  |        |        |        | 110 2  | 138 40 | 167 13 | 195 16 |
| 9       | 222 38 | 249 14 | 275 16 | 299 48 | 324 54 | 347 42 | 11 46  |
| 23      | 36 30  | 62 44  | 90 35  | 119 42 |        |        |        |
| July 1  |        |        |        |        | 149 10 | 178 1  | 205 52 |
| 7       | 232 43 | 258 36 | 284 45 | 308 15 | 332 13 | 356 55 | 19 54  |
| 21      | 44 36  | 70 58  | 96 3   | 128 37 | 158 48 | 188 16 |        |
| Aug. 1  |        |        | 202 28 | 226 43 | 255 38 | 280 39 | 305 00 |
| 11      | 328 59 | 352 43 | 16 2   | 40 39  | 66 00  | 93 9   | 122 2  |
| 25      | 162 17 | 182 43 | 211 55 | 239 17 |        |        |        |
| Sep. 1  | 252 29 | 277 44 | 302 5  | 326 00 | 349 45 | 13 31  | 37 35  |
| 15      | 62 25  | 88 26  | 116 7  | 140 30 | 175 50 | 205 49 | 234 2  |
| 29      | 261 23 |        |        |        |        |        |        |
| Oct. 1  |        | 286 42 | 311 00 | 334 48 | 358 32 | 22 31  | 48 50  |
| 13      | 72 14  | 98 23  | 125 51 | 155 9  | 184 20 | 213 52 | 242 52 |
| 27      | 269 38 | 295 5  | 319 25 |        |        |        |        |
| Nov. 1  |        |        |        |        |        |        | 331 20 |
| 11      | 355 10 | 18 59  | 43 36  | 69 1   | 95 20  | 122 47 | 160 31 |
| 17      | 179 40 | 208 2  | 233 33 | 264 9  | 290 17 | 315 18 | 339 17 |
| Dec. 1  | 2 59   | 27 3   | 52 00  | 78 4   | 105 17 | 133 16 | 161 10 |
| 15      | 189 45 | 217 47 | 245 23 | 272 20 | 298 17 | 323 4  | 347 1  |
| 29      | 10 46  | 34 1   |        |        |        |        |        |

Ayanamsa: 21° 48' 39"



## Longitudes of Planets

| 1958  | Sun       | Mars   | Merc.   | Merc.   | Jupit.  | Venus   | Saturn  | Rahu   |
|-------|-----------|--------|---------|---------|---------|---------|---------|--------|
| Jan.  | 5 284 39  | 249 20 | 265 11  | 267 00  | 209 8   | 317 10  | 259 57  | 217 9  |
|       | 15 284 50 | 249 21 | 271 00  | 276 22  | 210 11  | 315 40R | 201 11  | 216 37 |
|       | 25 285 1  | 249 22 | 277 45  | 281 53  | 210 58  | 310 26  | 262 2   | 216 5  |
| Feb.  | 5 315 10  | 270 31 | 295 48  | 304 23  | 211 24  | 304 29  | 262 57  | 215 35 |
|       | 14 323 17 | 277 41 | 312 19  | 320 37  | 211 40  | 300 50  | 263 46  | 215 5  |
|       | 24 335 23 | 284 15 | 329 13  | 338 22  | 211 32R | 301 28D | 264 27  | 214 30 |
| March | 6 345 25  | 292 9  | 347 51  | 357 11  | 211 6   | 305 21  | 265 00  | 213 58 |
|       | 16 355 24 | 299 27 | 7 18    | 16 17   | 210 23  | 311 43  | 265 24  | 213 14 |
|       | 26 5 20   | 306 50 | 23 40   | 32 40   | 209 26  | 319 45  | 265 38  | 212 11 |
| April | 6 15 12   | 314 2  | 29 45   | 30 1    | 208 17  | 328 53  | 265 43R | 212 24 |
|       | 16 25 2   | 321 24 | 27 10R  | 23 38   | 207 11  | 339 47  | 265 38  | 211 51 |
|       | 25 34 47  | 328 50 | 20 55   | 29 1    | 205 46  | 349 11  | 265 22  | 211 20 |
| May   | 5 44 00   | 336 11 | 21 5D   | 23 52   | 204 32  | 0 53    | 264 58  | 210 47 |
|       | 15 54 10  | 343 30 | 22 20   | 24 00   | 203 30  | 11 6    | 264 11  | 210 15 |
|       | 25 63 47  | 350 48 | 40 48   | 41 37   | 202 11  | 22 23   | 263 49  | 209 11 |
| June  | 4 73 23   | 358 1  | 57 25   | 57 12   | 202 11  | 33 50   | 263 9   | 209 11 |
|       | 14 82 57  | 5 9    | 77 45   | 78 43   | 201 11  | 45 25   | 262 23  | 208 40 |
|       | 24 92 29  | 12 9   | 99 31   | 109 43  | 201 48D | 57 7    | 261 11  | 208 8  |
| July  | 4 102 1   | 19 00  | 119 7   | 127 43  | 202 7   | 68 50   | 260 57  | 207 37 |
|       | 14 111 33 | 25 39  | 135 54  | 142 14  | 202 43  | 80 47   | 260 20  | 207 11 |
|       | 24 121 6  | 32 00  | 148 11  | 152 46  | 203 34  | 92 44   | 259 11  | 206 24 |
| Aug.  | 4 130 40  | 38 11  | 156 8   | 157 37  | 204 40  | 104 10  | 259 26  | 206 11 |
|       | 13 140 15 | 43 11  | 157 14  | 155 18  | 205 59  | 116 53  | 259 12  | 205 30 |
|       | 23 149 52 | 48 57  | 150 6   | 146 13  | 207 29  | 129 11  | 259 5   | 204 58 |
| Sep.  | 3 159 31  | 53 33  | 144 42  | 145 32D | 209 8   | 141 20  | 259 9D  | 204 27 |
|       | 12 169 14 | 57 25  | 151 50  | 150 24  | 210 58  | 153 41  | 259 24  | 203 55 |
|       | 22 178 59 | 60 20  | 152 12  | 177 22  | 212 53  | 165 11  | 259 47  | 203 22 |
| Oct.  | 2 188 47  | 62 1   | 153 28  | 155 13  | 214 54  | 178 30  | 260 20  | 202 48 |
|       | 12 198 39 | 62 30R | 203 40  | 211 50  | 217 00  | 190 59  | 261 00  | 202 11 |
|       | 22 208 25 | 61 26  | 210 43  | 227 22  | 219 39  | 203 00  | 261 18  | 201 47 |
| Nov.  | 1 218 34  | 59 00  | 234 48  | 241 59  | 221 20  | 216 3   | 262 42  | 201 15 |
|       | 11 228 35 | 55 35  | 248 51  | 255 14  | 223 32  | 228 11  | 263 43  | 200 11 |
|       | 21 238 40 | 52 10  | 260 45  | 264 36  | 225 44  | 241 10  | 264 47  | 200 12 |
| Dec.  | 1 248 47  | 49 00R | 265 11  | 271 15R | 227 52  | 253 44  | 265 53  | 199 40 |
|       | 11 258 56 | 47 6   | 255 45  | 250 32  | 229 58  | 266 18  | 267 4   | 199 11 |
|       | 21 269 7  | 46 36D | 249 35D | 252 15  | 231 59  | 278 52  | 268 14  | 198 36 |
|       | 31 279 18 | 47 23  | 257 11  | 263 11  | 233 54  | 201 53  | 269 26  | 198 4  |

Ayanamsa : 21° 49' 30"

## Longitude of the Moon

| 1958    | Sun.   | Tue.   | Thurs. | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  |        |        |        |        |        | 18 7   | 72 54  |
| 5       | 100 14 | 128 52 | 157 11 | 187 5  | 214 5  | 241 47 | 268 15 |
| 19      | 294 1  | 318 11 |        | 7 51   | 30 32  | 54 52  | 80 35  |
| Feb. 1  |        |        |        | 94 17  | 122 11 | 152 22 | 182 12 |
| 9       | 211 12 | 238 49 | 265 14 | 291 44 | 315 32 | 339 41 | 3 27   |
| 23      | 27 2   | 50 53  | 75 42  |        |        |        |        |
| March 1 |        |        |        | 119 9  | 130 33 | 160 35 | 191 1  |
| 9       | 220 13 | 248 49 | 275 7  | 300 11 | 324 41 | 348 31 | 18 11  |
| 23      | 36 48  | 59 49  | 84 42  | 110 56 | 138 59 |        |        |
| April 1 |        | 153 39 | 183 51 | 214 14 | 243 36 | 270 39 | 206 34 |
| 13      | 321 42 | 345 34 | 9 11   | 33 51  | 57 11  | 81 39  | 107 22 |
| 27      | 134 21 | 162 43 |        |        |        |        |        |
| May 1   |        |        | 192 19 | 222 20 | 251 11 | 279 31 | 305 39 |
| 11      | 330 20 | 354 9  | 18 43  | 41 34  | 66 3   | 91 23  | 117 37 |
| 25      | 144 47 | 172 52 | 201 44 | 230 21 |        |        |        |
| June 1  | 245 30 | 273 53 | 300 50 | 326 15 | 350 9  | 14 7   | 37 51  |
| 15      | 62 19  | 87 54  | 114 11 | 141 40 | 169 39 | 197 52 | 226 17 |
| 29      | 254 36 |        |        |        |        |        |        |
| July 1  |        | 282 18 | 308 55 | 334 12 | 358 24 | 22 11  | 45 52  |
| 13      | 70 29  | 107 27 | 123 12 | 151 57 | 180 26 | 208 52 | 236 53 |
| 27      | 261 19 | 291 25 | 317 19 |        |        |        |        |
| Aug. 1  |        |        |        |        |        |        | 329 57 |
| 3       | 354 25 | 18 11  | 41 53  | 66 59  | 91 12  | 118 23 | 146 53 |
| 17      | 176 9  | 205 19 | 233 46 | 261 16 | 287 11 | 313 22 | 338 33 |
| 31      | 2 43   |        |        |        |        |        |        |
| Sep. 1  |        |        |        |        | 13 31  | 11 10  | 61 56  |
| 7       | 86 36  | 112 41 | 140 40 | 170 8  | 200 11 | 229 33 | 257 59 |
| 21      | 284 54 | 310 11 | 335 22 | 359 28 | 23 9   |        |        |
| Oct. 1  |        |        |        |        |        | 40 43  | 70 31  |
| 5       | 95 12  | 121 9  | 148 51 | 177 59 | 208 36 | 238 42 | 267 31 |
| 19      | 294 35 | 320 6  | 344 17 | 8 19   | 31 55  | 55 37  | 79 42  |
| Nov. 1  |        |        |        | 92 1   | 117 15 | 143 48 | 171 54 |
| 9       | 201 29 | 231 47 | 261 39 | 290 00 | 316 27 | 341 20 | 5 13   |
| 23      | 28 47  | 52 32  | 76 41  | 101 33 |        |        |        |
| Dec. 1  |        |        |        |        | 127 11 | 153 46 | 181 11 |
| 7       | 210 20 | 239 58 | 269 33 | 297 29 | 324 37 | 349 39 | 14 31  |
| 21      | 37 4   | 60 55  | 85 37  | 111 2  | 137 19 | 164 19 |        |

Ayanamsa: 21° 49' 30"

## Longitudes of Planets

| 1959  | Sun       | Mars   | Merc.   | Merc.   | Jupit.  | Venus   | Saturn  | Rahu   |
|-------|-----------|--------|---------|---------|---------|---------|---------|--------|
| Jan.  | 5 284 24  | 18 12  | 263 5   | 269 44  | 234 48  | 297 42  | 270 00  | 197 50 |
|       | 15 294 35 | 50 33  | 276 49  | 284 13  | 238 29  | 310 14  | 271 8   | 197 17 |
|       | 25 304 46 | 11 41  | 291 58  | 299 45  | 241 00  | 322 45  | 272 13  | 196 45 |
| Feb.  | 5 314 55  | 57 27  | 307 57  | 316 28  | 239 19  | 335 14  | 273 15  | 196 11 |
|       | 14 325 3  | 61 44  | 325 19  | 334 27  | 240 24  | 347 40  | 274 11  | 195 42 |
|       | 24 335 8  | 66 22  | 343 47  | 353 6   | 241 13  | 0 4     | 275 00  | 195 10 |
| March | 6 345 10  | 71 18  | 1 36    | 3 20    | 241 44  | 12 23   | 275 43  | 194 38 |
|       | 15 355 10 | 76 27  | 12 17   | 12 50R  | 241 58  | 24 38   | 276 16  | 194 11 |
|       | 25 5 5    | 81 47  | 10 18   | 6 14    | 241 54R | 6 40    | 276 42  | 193 34 |
| April | 5 14 58   | 87 16  | 2 35    | 0 48    | 241 31  | 48 40   | 276 57  | 193 4  |
|       | 15 24 47  | 92 52  | 1 10D   | 1 10D   | 240 50  | 60 45   | 277 11  | 192 31 |
|       | 25 34 53  | 98 34  | 7 28    | 12 46   | 239 53  | 72 31   | 277 00R | 192 00 |
| May   | 5 44 16   | 104 21 | 19 5    | 26 21   | 238 46  | 84 2    | 276 47  | 191 28 |
|       | 15 53 56  | 110 12 | 34 28   | 43 27   | 237 38  | 95 20   | 276 24  | 190 56 |
|       | 25 63 33  | 116 6  | 53 16   | 63 49   | 236 18  | 106 36  | 275 54  | 190 24 |
| June  | 5 73 9    | 122 2  | 74 47   | 85 37   | 235 4   | 117 24  | 275 18  | 189 52 |
|       | 14 82 43  | 128 8  | 95 54   | 105 17  | 233 50  | 127 47  | 274 36  | 189 21 |
|       | 24 92 15  | 134 5  | 113 43  | 121 9   | 233 7   | 137 38  | 273 53  | 188 49 |
| July  | 4 101 47  | 140 11 | 127 32  | 132 46  | 232 30  | 146 39  | 273 0   | 188 11 |
|       | 14 111 20 | 146 20 | 136 37  | 133 35  | 231 11  | 154 38  | 272 27  | 187 46 |
|       | 24 120 52 | 152 30 | 139 15R | 137 14  | 232 9D  | 161 00  | 271 49  | 187 14 |
| Aug.  | 3 130 28  | 158 44 | 134 15  | 130 31  | 232 26  | 163 5   | 271 15  | 186 43 |
|       | 13 140 1  | 165 3  | 128 3   | 128 7D  | 233 11  | 160 00R | 270 52  | 186 11 |
|       | 23 149 38 | 171 24 | 131 13  | 137 17  | 233 10  | 163 3   | 270 35  | 185 39 |
| Sep.  | 2 159 17  | 177 48 | 145 17  | 154 32  | 234 56  | 157 18  | 270 28  | 185 11 |
|       | 12 168 59 | 184 16 | 164 7   | 173 32  | 236 16  | 152 00  | 270 30D | 184 34 |
|       | 22 178 11 | 190 47 | 182 35  | 191 14  | 237 47  | 149 53  | 270 42  | 184 5  |
| Oct.  | 2 188 33  | 197 22 | 199 30  | 207 26  | 239 27  | 151 38D | 271 11  | 183 33 |
|       | 12 198 25 | 204 01 | 218 58  | 222 20  | 241 18  | 156 30  | 271 36  | 183 00 |
|       | 22 208 20 | 210 45 | 229 18  | 235 45  | 242 16  | 163 33  | 272 15  | 182 11 |
| Nov.  | 1 218 19  | 217 33 | 241 38  | 246 24  | 245 20  | 172 10  | 272 59  | 181 56 |
|       | 11 228 21 | 224 26 | 249 25  | 249 23R | 247 28  | 181 45  | 273 50  | 181 25 |
|       | 21 238 11 | 231 22 | 245 16  | 238 11  | 249 41  | 192 07  | 274 53  | 180 51 |
| Dec.  | 1 248 31  | 238 15 | 234 11  | 234 16D | 251 55  | 203 3   | 275 57  | 180 21 |
|       | 11 258 41 | 245 11 | 237 49  | 243 19  | 254 10  | 214 21  | 277 4   | 179 50 |
|       | 21 268 52 | 252 42 | 249 51  | 256 54  | 256 25  | 225 58  | 278 13  | 179 16 |
|       | 31 279 3  | 259 57 | 264 14  | 271 45  | 258 38  | 237 47  | 279 28  | 178 46 |

Ayanamsa : 21° 50' 20"

## Longitude of the Moon

| 1959    | Sun.   | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  |        |        | 178 3  | 206 1  | 234 37 | 263 31 | 292 ■  |
| 11      | 319 19 | 345 23 | 9 30   | 33 12  | 56 53  | 81 12  | 106 40 |
| 25      | 133 17 | 160 48 | 188 50 | 217 00 |        |        |        |
| Feb. 1  | 231 6  | 259 15 | 287 5  | 314 14 | 340 18 | 5 13   | 29 ■   |
| 15      | 52 45  | 76 43  | 101 38 | 128 00 | 155 47 | 184 32 | 213 28 |
| March 1 | 242 4  | 269 58 | 296 36 | 323 23 | 348 45 | 13 16  | 37 7   |
| 15      | 60 45  | 84 40  | 109 31 | 135 51 | 163 53 | 193 20 | 223 ■  |
| 29      | 252 24 | 280 33 |        |        |        |        |        |
| April 1 |        |        |        |        |        | 294 6  | 320 17 |
| 5       | 345 28 | 9 51   | 33 43  | 57 21  | 81 5   | 105 22 | 130 46 |
| 19      | 157 45 | 186 29 | 216 35 | 246 56 | 276 19 | 304 2  |        |
| May 1   |        |        |        |        |        |        | 330 4  |
| 3       | 354 50 | 18 50  | 42 30  | 66 8   | 90 ■   | 114 26 | 139 42 |
| 17      | 166 30 | 194 53 | 223 47 | 255 20 | 285 7  | 313 9  | 339 23 |
| 31      | 3 55   |        |        |        |        |        |        |
| June 1  |        |        |        |        | 15 54  | 39 32  | 63 10  |
| 7       | 87 7   | 111 32 | 136 39 | 162 40 | 189 58 | 219 42 | 248 37 |
| 21      | 278 43 | 307 44 | 334 52 | 0 19   | 24 39  |        |        |
| July 1  |        |        |        |        |        | 48 8   | 71 52  |
| 5       | 96 1   | 120 58 | 146 35 | 172 56 | 200 19 | 228 40 | 257 53 |
| 19      | 287 18 | 315 55 | 343 00 | 8 26   | 32 40  | 56 21  | 80 11  |
| Aug. 1  |        |        |        | 92 20  | 117 14 | 143 10 | 169 50 |
| 9       | 197 14 | 225 13 | 254 41 | 282 20 | 310 36 | 337 52 | 3 49   |
| 23      | 28 31  | 52 28  | 76 11  | 100 23 | 125 33 |        |        |
| Sep. 1  |        | 138 34 | 165 33 | 193 30 | 221 57 | 250 30 | 278 45 |
| 13      | 306 28 | 333 24 | 359 22 | 24 20  | 48 30  | 72 14  | 96 6   |
| 27      | 120 43 | 146 37 |        |        |        |        |        |
| Oct. 1  |        |        | 173 59 | 202 43 | 232 6  | 261 17 | 289 35 |
| 11      | 316 47 | 342 56 | 8 11   | 32 ■■  | 56 43  | 80 26  | 104 15 |
| 25      | 128 45 | 152 27 | 181 54 | 211 3  |        |        |        |
| Nov. 1  | 226 5  | 256 19 | 285 51 | 313 39 | 339 59 | 5 7    | 29 20  |
| 15      | 53 27  | 77 11  | 100 56 | 125 ■  | 149 54 | 176 10 | 204 15 |
| 29      | 234 6  |        |        |        |        |        |        |
| Dec. 1  |        | 264 48 | 294 51 | 323 9  | 349 32 | 14 27  | 39 2   |
| 13      | 62 17  | 86 2   | 109 37 | 134 15 | 159 11 | 185 15 | 212 54 |
| 27      | 242 17 | 272 46 | 302 58 |        |        |        |        |

Ayanamsa: 21° 50' 20"

## Longitudes of Planets

| 1960    | Sun    | Mars    | Merc.   | Merc.   | Jupit.  | Venus  | Saturn  | Rahu   |
|---------|--------|---------|---------|---------|---------|--------|---------|--------|
| Jan. 5  | 284 9  | 263 36  | 271 45  | 279 27  | 259 43  | 243 46 | 280 00  | 178 30 |
| 15      | 294 21 | 270 57  | 287 21  | 295 27  | 261 50  | 255 48 | 281 9   | 177 58 |
| 25      | 304 31 | 278 24  | 303 47  | 312 22  | 263 52  | 267 56 | 282 19  | 177 25 |
| Feb. 1  | 314 41 | 285 53  | 321 11  | 330 8   | 265 46  | 280 9  | 283 21  | 176 35 |
| 14      | 324 48 | 293 26  | 338 56  | 346 55  | 267 11  | 292 23 | 284 23  | 176 23 |
| 24      | 334 53 | 301 1   | 352 57  | 355 45  | 269 9   | 304 40 | 285 20  | 175 50 |
| March 5 | 344 56 | 308 40  | 354 43R | 350 42  | 279 31  | 316 58 | 286 13  | 175 19 |
| 15      | 354 55 | 316 20  | 346 00  | 342 51  | 271 42  | 329 17 | 286 57  | 174 47 |
| 25      | 4 51   | 324 2   | 342 10D | 343 48  | 272 35  | 341 36 | 287 33  | 174 14 |
| April 4 | 14 44  | 331 44  | 347 14  | 352 3   | 273 15  | 353 55 | 288 00  | 173 43 |
| 14      | 24 33  | 339 26  | 357 56  | 5 42    | 273 34  | 6 14   | 288 18  | 173 12 |
| 24      | 34 19  | 347 8   | 12 17   | 20 36   | 273 35R | 18 32  | 288 25  | 172 40 |
| May 4   | 44 2   | 354 48  | 29 38   | 39 11   | 273 17  | 30 49  | 288 23R | 172 7  |
| 14      | 53 42  | 26      | 49 55   | 60 48   | 272 41  | 43 6   | 288 12  | 171 37 |
| 24      | 63 19  | 10 1    | 71 38   | 81 52   | 271 50  | 55 23  | 287 52  | 171 5  |
| June 3  | 72 55  | 17 31   | 91 9    | 119 19  | 270 47  | 67 40  | 287 21  | 170 34 |
| 13      | 82 29  | 24 57   | 108 19  | 112     | 269 35  | 79 57  | 286 47  | 170 00 |
| 23      | 92 2   | 32 17   | 116 28  | 119 15  | 268 19  | 92 14  | 286 7   | 169 30 |
| July 3  | 101 34 | 39 29   | 120 14  | 119 18R | 267 7   | 104 31 | 285 26  | 168 58 |
| 13      | 111 5  | 46 33   | 116 44  | 113 27  | 265 55  | 116 49 | 284 40  | 168 25 |
| 23      | 120 38 | 53 29   | 110 49  | 110 00  | 265 00  | 129 8  | 283 57  | 167 54 |
| Aug. 2  | 130 12 | 60 13   | 111 40D | 115 57  | 264 20R | 141 27 | 283 20  | 167 21 |
| 12      | 139 46 | 66 45   | 122 36  | 131 8   | 263 54  | 153 46 | 282 45  | 166 50 |
| 22      | 149 24 | 73 3    | 140 47  | 150 44  | 263 48D | 166 5  | 282 18  | 166 18 |
| Sep. 1  | 159 3  | 79 8    | 160 30  | 169 50  | 264 1   | 178 24 | 282 00  | 165 46 |
| 11      | 168 45 | 84 48   | 178 42  | 187 5   | 264 32  | 190 42 | 281 51  | 165 16 |
| 21      | 178 30 | 90 9    | 195 2   | 202 35  | 265 19  | 203 3  | 281 51D | 164 43 |
| Oct. 1  | 188 19 | 95      | 209 43  | 216 22  | 266 25  | 215 15 | 282 1   | 164 11 |
| 11      | 198 10 | 99 28   | 222 30  | 227 48  | 267 44  | 227 31 | 282 20  | 163 40 |
| 21      | 208 6  | 103 11  | 231 52  | 233 55  | 269 15  | 239    | 282 51  | 163 8  |
| 31      | 218    | 106     | 232 53R | 228 8   | 270 57  | 251 56 | 283 29  | 162 35 |
| Nov. 10 | 228 6  | 107 58  | 221 47  | 218 11  | 272 49  | 264 5  | 284 14  | 162    |
| 20      | 238 10 | 108 37R | 219 11D | 223 33  | 274 50  | 276 12 | 285 7   | 161 32 |
| 30      | 248 17 | 108 1   | 229 43  | 236 45  | 276 59  | 288 14 | 286 5   | 161 1  |
| Dec. 10 | 258 26 | 105 53R | 244     | 252 44  | 279 11  | 300 10 | 287     | 160 30 |
| 20      | 268 37 | 102 38  | 259 24  | 267 11  | 281 36  | 311 58 | 288 16  | 160 00 |
| 30      | 278 48 | 98 44   | 275     | 283 1   | 283 11  | 323 31 | 289 25  | 159 27 |

Ayanamsa: 21° 51' 10"

1960 A.D.

# RAMAN'S EPHEMERIS Longitude of the Moon

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|       | 1960 | Sun.   | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|-------|------|--------|--------|--------|--------|--------|--------|--------|
| Jan.  | 1    |        |        |        |        |        |        | 317 19 |
|       | 3    | 345 ■  | 10 45  | 35 21  | 59 ■   | 82 51  | 106 56 | 131 15 |
|       | 17   | 156 14 | 182 ■  | 208 53 | 236 50 | 266 18 | 296 6  | 325 18 |
|       | 31   | 350 59 |        |        |        |        |        |        |
| Feb.  | 1    |        |        |        |        | 6 10   | 31 25  | 56 31  |
|       | 7    | 79 17  | 103 10 | 127 ■  | 152 54 | 178 56 | 205 47 | 233 26 |
|       | 21   | 261 49 | 290 36 | 319 12 | 347 3  | 13 34  |        |        |
| March | 1    |        | 26 41  | 51 23  | 75 20  | 99 15  | 123 25 | 146 41 |
|       | 13   | 175 46 | 202 7  | 230 11 | 258 36 | 286 55 | 315 5  | 343 8  |
|       | 27   | 9 2    | 34 36  | 59 13  |        |        |        |        |
| April | 1    |        |        |        |        |        |        | 71 14  |
|       | 3    | 95 3   | 118 59 | 143 39 | 169 32 | 197 01 | 225 38 | 254 51 |
|       | 17   | 283 46 | 311 51 | 336 57 | 5 1    | 31 2   | 55 12  | 79 20  |
| May   | 1    | 103 8  | 127 2  | 151 35 | 177 29 | 205 10 | 234 26 | 264 27 |
|       | 15   | 294 4  | 322 21 | 348 47 | 14 55  | 39 50  | 64 4   | 87 58  |
|       | 29   | 111 42 | 135 22 |        |        |        |        |        |
| June  | 1    |        |        |        |        |        | 147 38 | 172 41 |
|       | ■    | 190 20 | 227 54 | 258 2  | 288 23 | 318 1  | 343 49 | 11 57  |
|       | 19   | 36 55  | 61 6   | 84 58  | 108 45 | 132 39 | 156 40 |        |
| July  | 1    |        |        |        |        |        |        | 179 43 |
|       | 3    | 208 13 | 236 31 | 266 34 | 297 2  | 326 48 | 354 52 | 21 9   |
|       | 17   | 46 3   | 70 ■   | 93 54  | 117 40 | 141 38 | 166 ■  | 191 26 |
|       | 31   | 217 55 |        |        |        |        |        |        |
| Aug.  | 1    |        |        |        |        | 231 46 | 260 32 | 290 22 |
|       | 7    | 320 37 | 349 32 | 16 40  | 42 20  | 66 48  | 90 39  | 114 25 |
|       | 21   | 138 26 | 163 6  | 188 22 | 214 48 | 241 52 | 270 30 |        |
| Sep.  | 1    |        |        | 285 17 | 314 18 | 343 18 | 11 14  | 37 43  |
|       | 11   | 62 49  | 86 55  | 110 42 | 134 ■  | 160 16 | 184 54 | 211 39 |
|       | 25   | 239 1  | 267 6  | 295 32 |        |        |        |        |
| Oct.  | 1    |        |        |        | 323 58 | 352 ■  | 19 24  | 45 8   |
|       | 9    | 70 41  | 94 48  | 118 34 | 142 26 | 167 22 | 193 30 | 220 58 |
|       | 23   | 249 23 | 278 ■  | 306 29 | 334 33 | 1 44   |        |        |
| Nov.  | 1    |        | 14 57  | 41 6   | ■ 22   | 90 47  | 114 36 | 138 17 |
|       | 13   | 162 34 | 187 55 | 215 9  | 244 11 | 273 51 | 302 ■  | 331 15 |
|       | 27   | 358 26 | 24 39  |        |        |        |        |        |
| Dec.  | 1    |        |        | 50 6   | 74 53  | 99 ■   | 122 47 | 146 25 |
|       | 11   | 170 42 | 196 ■  | 223 10 | 252 16 | 282 29 | 312 33 | 341 21 |
|       | 25   | 8 35   | 34 31  | 59 20  | 83 45  |        |        |        |

Ayanamsa: 21° 51' 10"

## Longitudes of Planets

| 1961  | Sun       | Mars   | Mer.    | Merc.   | Jupit.  | Venus  | Saturn  | Rahu   |
|-------|-----------|--------|---------|---------|---------|--------|---------|--------|
| Jan.  | 5 284 55  | 96 24R | 284 39  | 292 50  | 285 8   | 320 54 | 200 7   | 159 8  |
|       | 15 296 7  | 93 35  | 301 11  | 309 43  | 287 28  | 341 31 | 291 18  | 158 36 |
|       | 25 306 18 | 90 52  | 318 13  | 326 23  | 289 46  | 352 12 | 292 29  | 158 3  |
| Feb.  | 4 315 26  | 90 1   | 333 27  | 338 7   | 292 2   | 2 14   | 293 38  | 157 32 |
|       | 14 325 34 | 90 25D | 338 57R | 335 42  | 294 15  | 11 24  | 294 44  | 157 00 |
|       | 24 335 39 | 91 56  | 330 23  | 328 00  | 291 21  | 19 19  | 295 46  | 156 28 |
| March | 6 345 41  | 94 21  | 334 21  | 325 21D | 298 21  | 25 23  | 296 43  | 155 50 |
|       | 16 356 40 | 97 29  | 328 25  | 332 57  | 301 12  | 33 44  | 297 34  | 155 25 |
|       | 26 5 36   | 101 12 | 338 35  | 341 5   | 304 55  | 41 29  | 298 19  | 154 53 |
| April | 5 15 28   | 105 21 | 352 18  | 0 11    | 303 24  | 49 13  | 299 55  | 154 22 |
|       | 15 25 17  | 109 52 | 8 43    | 17 54   | 304 42  | 18 6   | 300 53  | 153 49 |
|       | 25 35 1   | 114 41 | 27 43   | 26 10   | 305 44  | 26 30  | 301 41  | 153 17 |
| May   | 5 44 45   | 119 43 | 48 57   | 59 36   | 306 30  | 12 57D | 299 50  | 152 47 |
|       | 15 54 25  | 124 57 | 59 32   | 70 23   | 307 50  | 15 55  | 300 50R | 152 15 |
|       | 25 64 1   | 130 21 | 85 54   | 91 59   | 307 9   | 21 31  | 301 39  | 151 42 |
| June  | 4 73 22   | 135 54 | 96 31   | 99 24   | 307 1R  | 28 15  | 302 21  | 151 10 |
|       | 14 83 12  | 141 35 | 100 26  | 99 37R  | 306 32  | 35 36  | 298 52  | 150 45 |
|       | 24 92 45  | 147 23 | 97 19   | 94 24   | 305 48  | 47 0   | 298 17  | 150 8  |
| July  | 4 102 17  | 153 15 | 92 6R   | 91 23D  | 304 48  | 57 13  | 297 37  | 149 35 |
|       | 14 111 49 | 158 18 | 92 46   | 96 22   | 303 23  | 67 45  | 298 54  | 149 1  |
|       | 24 121 22 | 165 20 | 100 36  | 109 44  | 302 23  | 78 39  | 299 10  | 148 32 |
| Aug.  | 4 130 44  | 171 30 | 118 55  | 118 30  | 301 4   | 89 50  | 296 37  | 148 00 |
|       | 14 140 29 | 177 46 | 139 17  | 140 17  | 299 52  | 101 15 | 294 47  | 147 28 |
|       | 24 150 1  | 184 7  | 158 46  | 167 37  | 298 50  | 112 51 | 294 13  | 146 57 |
| Sep.  | 3 159 46  | 190 34 | 176 1   | 183 58  | 298 2   | 124 37 | 293 45  | 146 25 |
|       | 12 169 25 | 197 6  | 191 21  | 196 11  | 297 31  | 136 32 | 292 70  | 145 52 |
|       | 22 179 14 | 203 44 | 204 29  | 209 59  | 297 19  | 148 36 | 291 16  | 145 20 |
| Oct.  | 1 188 1   | 209 46 | 211 40  | 216 55  | 297 24D | 159 34 | 290 15  | 144 52 |
|       | 11 197 56 | 216 34 | 218 00  | 216 57R | 297 50  | 171 49 | 289 23  | 144 21 |
|       | 21 207 51 | 223 29 | 210 45R | 204 57  | 296 33  | 184 15 | 293 42  | 143 50 |
|       | 31 217 49 | 230 28 | 202 21  | 204 16D | 299 35  | 196 35 | 294 9   | 143 16 |
| Nov.  | 9 226 51  | 236 51 | 208 11  | 214 45  | 300 42  | 207 50 | 294 42  | 142 40 |
|       | 19 236 56 | 244 1  | 221 40  | 229 53  | 302 12  | 220 21 | 295 26  | 142 17 |
|       | 29 247 1  | 251 17 | 231 18  | 245 33  | 303 53  | 232 54 | 296 17  | 141 45 |
| Dec.  | 9 257 10  | 258 38 | 233 24  | 261 15  | 305 45  | 244 57 | 297 15  | 141 14 |
|       | 19 267 21 | 266 1  | 269 1   | 277 8   | 307 46  | 257 1  | 298 17  | 140 41 |
|       | 29 277 32 | 273 35 | 285 9   | 293 17  | 309 54  | 270 37 | 299 24  | 140 10 |

Ayanamsa: 21° 52' 01"



## Longitude of the Moon

|       | 1961 | Sun    | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|-------|------|--------|--------|--------|--------|--------|--------|--------|
| Jan.  | 1    | 95 48  | 119 34 | 143 11 | 167 4  | 191 43 | 217 45 | 245 38 |
|       | 15   | 275 16 | 305 45 | 335 47 | 4 20   | 31 7   | 56 28  | 80 19  |
|       | 29   | 104 40 | 128 20 |        |        |        |        |        |
| Feb.  | 1    |        |        |        |        |        | 140 11 | 164 6  |
|       | 5    | 188 32 | 213 54 | 240 36 | 268 56 | 298 32 | 328 48 | 358 21 |
|       | 19   | 26 22  | 52 39  | 77 32  | 101 29 | 125 9  |        |        |
| March | 1    |        |        |        |        |        | 148 56 | 173 10 |
|       | 5    | 198 6  | 223 56 | 250 45 | 278 43 | 307 39 | 337 11 | 351 46 |
|       | 19   | 34 17  | 60 44  | 85 44  | 109 44 | 133 24 | 157 18 | 181 56 |
| April | 1    |        |        |        | 194 36 | 220 41 | 247 39 | 275 20 |
|       | 9    | 303 32 | 332 5  | 0 37   | 28 40  | 55 38  | 81 17  | 105 44 |
|       | 23   | 129 30 | 153 16 | 177 40 | 203 12 |        |        |        |
| May   | 1    |        |        |        |        | 230 2  | 257 51 | 286 10 |
|       | 7    | 314 30 | 342 38 | 10 24  | 37 36  | 63 59  | 89 19  | 113 39 |
|       | 21   | 137 23 | 161 11 | 185 35 | 211 23 | 238 46 | 267 23 |        |
| June  | 1    |        |        | 281 57 | 311 00 | 339 29 | 6 41   | 34 3   |
|       | 11   | 60 9   | 85 21  | 109 53 | 133 42 | 157 18 | 181 17 | 206 21 |
|       | 25   | 233 3  | 261 29 | 291 6  |        |        |        |        |
| July  | 1    |        |        |        | 320 52 | 349 52 | 17 38  | 44 12  |
|       | 9    | 69 44  | 94 27  | 118 32 | 141 56 | 165 47 | 189 48 | 214 48 |
|       | 23   | 241 22 | 260 46 | 299 35 | 329 51 | 359 24 |        |        |
| Aug.  | 1    |        | 13 39  | 40 58  | 66 48  | 91 32  | 115 32 | 139 13 |
|       | 13   | 162 48 | 186 40 | 211 13 | 236 54 | 264 6  | 292 58 | 323 1  |
|       | 27   | 352 15 | 22 31  | 50 7   |        |        |        |        |
| Sep.  | 1    |        |        |        |        |        |        | 63 16  |
|       | 3    | 88 26  | 112 11 | 136 13 | 159 50 | 183 46 | 208 17 | 233 36 |
|       | 17   | 260 00 | 287 41 | 316 39 | 346 29 | 16 13  | 44 51  | 71 46  |
| Oct.  | 1    | 97 00  | 121 7  | 144 43 | 168 27 | 192 44 | 217 47 | 243 40 |
|       | 15   | 270 22 | 297 55 | 326 19 | 355 22 | 24 31  | 52 50  | 79 44  |
|       | 29   | 105 3  | 129 11 |        |        |        |        |        |
| Nov.  | 1    |        |        |        |        |        | 141 1  | 164 40 |
|       | 5    | 188 49 | 213 57 | 240 7  | 267 10 | 294 48 | 322 47 | 351 3  |
|       | 19   | 19 23  | 47 24  | 74 32  | 100 24 | 125 1  | 148 49 |        |
| Dec.  | 1    |        |        |        |        |        |        | 172 29 |
|       | 3    | 196 43 | 222 7  | 248 53 | 276 47 | 305 15 | 333 44 | 1 54   |
|       | 17   | 29 37  | 56 45  | 83 0   | 108 28 | 132 52 | 156 39 | 180 18 |
|       | 31   | 204 30 |        |        |        |        |        |        |

Ayanamsa: 21° 52' 01"

# RAMAN'S EPHEMERIS Longitudes of Planets

1962 A.D.

| 1962  | Sun      | Mars.   | Merc.   | Merc.   | Jupit.  | Venus   | Saturn  | Rahu   |
|-------|----------|---------|---------|---------|---------|---------|---------|--------|
| Jan.  | ■ 284 40 | 278 53  | 296 32  | 304 36  | 311 33  | 279 26  | 300 16  | 139 48 |
| 15    | 294 52   | 286 32  | 312 12  | 318 35  | 313 46  | 292 1   | 301 23  | 139 16 |
| 25    | 305 ■    | 294 13  | 322 23  | 323 2R  | 316 7   | 304 34  | 302 34  | 138 42 |
| Feb.  | 4 315 11 | 301 59  | 317 31R | 311 42  | 318 30  | 317 9   | 303 45  | 138 12 |
| 14    | 325 19   | 309 46  | 307 59  | 307 24D | 320 53  | 329 41  | 304 54  | 137 40 |
| 24    | 335 24   | 317 35  | 309 28  | 313 23  | 323 16  | 342 11  | 306 1   | 137 ■  |
| March | 6 345 26 | 325 26  | 318 1   | 324 38  | 325 37  | 354 40  | 307 5   | 136 37 |
| 16    | 355 26   | 333 17  | 331 26  | 338 50  | 327 54  | 7 7     | 308 ■   | 136 5  |
| 26    | 5 21     | 341 7   | 346 49  | 355 20  | 330 8   | 19 32   | 308 56  | 135 33 |
| April | 5 15 14  | 348 57  | ■ 26    | 14 8    | 332 14  | 31 54   | 309 42  | 135 1  |
| 15    | 25 3     | 356 44  | 24 22   | 34 56   | 334 14  | 44 13   | 310 20  | 134 30 |
| 25    | 34 49    | 4 20    | 45 24   | 55 8    | 336 5   | 56 28   | 310 50  | 133 58 |
| May   | 5 44 31  | 12 11   | 63 37   | 70 32   | 337 45  | 68 39   | 311 10  | 133 ■  |
| 15    | 54 11    | 19 49   | 75 42   | 79 1    | 339 14  | 80 ■    | 311 22  | 132 54 |
| 25    | 63 49    | 27 22   | ■ 21    | 80 2R   | 340 28  | 92 52   | 311 23R | 132 22 |
| June  | ■ 73 24  | 34 51   | 77 40R  | 74 56   | 341 27  | 104 52  | 311 15  | 131 52 |
| 14    | 82 58    | 42 14   | 72 41   | 71 51   | 342 11  | 116 46  | 310 58  | 131 20 |
| 24    | 92 31    | 49 32   | 72 53D  | 75 52D  | 342 35  | 128 34  | 310 32  | 130 48 |
| July  | 4 102 3  | 56 42   | 80 41   | 87 14   | 342 41R | 140 15  | 309 58  | 130 15 |
| 14    | 111 35   | 63 45   | 94 52   | 104 60  | 342 27  | 151 47  | 309 19  | 129 44 |
| 24    | 121 7    | 70 41   | 115 10  | 125 43  | 341 54  | 163 9   | 308 36  | 129 ■  |
| Aug.  | 3 130 41 | 77 29   | 136 00  | 145 43  | 341 5   | 174 17  | 307 52  | 128 40 |
| 13    | 140 16   | ■ 9     | 154 48  | 163 16  | 340 1   | 185 9   | 307 8   | 128 ■  |
| 23    | 149 53   | 90 39   | 171 8   | 178 24  | 338 46  | 195 39  | 306 27  | 127 ■  |
| Sep.  | 2 150 33 | 96 59   | 185 2   | 190 57  | 337 28R | 205 41  | 305 51  | 127 ■  |
| 12    | 169 15   | 103 09  | 195 26  | 199 41  | 336 10  | 216 5   | 305 22  | 126 34 |
| 22    | 170 00   | 109 1   | 201 38  | 201 5R  | 335 00  | 223 29  | 305 00  | 126 2  |
| Oct.  | 2 180 49 | 114 ■   | 197 32R | 191 57  | 334 00  | 230 31  | 304 48  | 125 30 |
| 12    | 198 41   | 120 16  | 187 ■   | 186 51D | 333 18  | 235 33  | 304 46D | 124 ■  |
| 22    | 208 36   | 125 24  | 190 24  | 196 40  | 332 54  | 237 37  | 304 54  | 124 26 |
| Nov.  | 1 218 35 | 130 10  | 204 14  | 212 ■   | 332 50  | 238 54R | 305 12  | 123 55 |
| 11    | 228 37   | 134 27  | 230 24  | 228 ■   | 333 7   | 230 46  | 305 30  | 123 22 |
| 21    | 238 41   | 138 12  | 236 28  | 244 22  | 333 42  | 235 6   | 306 15  | 122 50 |
| Dec.  | 1 248 ■  | 141 ■   | 252 13  | 260 ■   | 334 37  | 222 18D | 307 1   | 122 20 |
| 11    | 258 57   | 143 28  | 267 52  | 275 41  | 335 49  | 223 28D | 307 52  | 121 48 |
| 21    | 269 8    | 144 39  | 283 27  | 291 ■   | 337 16  | 227 59  | 308 50  | 121 14 |
| 31    | 279 19   | 144 37R | 298 2   | 303 42  | 338 55  | 234 53  | 308 53  | 120 42 |

Ayanamsa: 21° 52' 51"

## Longitude of the Moon

| 1962    | Sun.   | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  |        |        |        |        | 217 1  | 243 12 | 270 59 |
| 7       | 300 1  | 329 26 | 358 30 | 26 31  | 53 39  | 79 35  | 104 44 |
| 21      | 129 9  | 153 1  | 176 37 | 200 28 | 225 5  | 251 5  |        |
| Feb. 1  |        |        | 264 44 | 293 18 | 323 9  | 353 15 | 22 31  |
| 11      | 50 19  | 76 37  | 101 42 | 125 59 | 269 47 | 173 26 | 197 11 |
| 25      | 221 25 | 246 33 |        |        |        |        |        |
| March 1 |        |        | 273 6  | 301 20 | 331 7  | 1 32   | 31 22  |
| 11      | 59 37  | 86 2   | 110 56 | 134 57 | 158 35 | 183 15 | 206 15 |
| 25      | 230 45 | 250 2  | 282 25 | 310 14 |        |        |        |
| April 1 | 324 43 | 354 32 | 24 44  | 54 2   | 81 37  | 107 21 | 131 43 |
| 15      | 155 26 | 179 4  | 203 7  | 227 45 | 253 4  | 279 17 | 306 15 |
| 29      | 334 24 |        |        |        |        |        |        |
| May 1   |        | 3 35   | 33 10  | 62 9   | 89 15  | 115 30 | 139 58 |
| 13      | 163 43 | 187 28 | 211 43 | 236 49 | 262 46 | 289 32 | 316 57 |
| 27      | 345 49 | 13 38  | 42 24  |        |        |        |        |
| June 1  |        |        |        |        |        |        | 56 38  |
| 3       | 84 22  | 110 46 | 135 46 | 159 49 | 183 33 | 207 37 | 232 32 |
| 17      | 256 35 | 285 41 | 313 35 | 341 50 | 10 13  | 38 26  |        |
| July 1  | 93 0   | 118 58 | 143 45 | 167 44 | 191 29 | 215 34 | 240 34 |
| 15      | 266 56 | 294 38 | 323 20 | 352 24 | 21 9   | 49 11  | 76 15  |
| 29      | 102 22 | 127 35 |        |        |        |        |        |
| Aug. 1  |        |        |        |        |        | 139 53 | 164 1  |
| 5       | 187 45 | 211 33 | 235 59 | 261 34 | 288 45 | 317 31 | 347 16 |
| 19      | 17 1   | 45 48  | 73 14  | 99 18  | 124 22 | 148 41 | 172 35 |
| Sep. 1  |        |        |        | 184 26 | 208 9  | 232 10 | 256 59 |
| 9       | 283 9  | 311 4  | 340 39 | 11 5   | 41 3   | 69 33  | 96 14  |
| 23      | 121 28 | 145 45 | 169 34 | 193 16 |        |        |        |
| Oct. 1  |        |        |        |        | 217 5  | 241 13 | 265 2  |
| 7       | 291 59 | 319 34 | 348 53 | 19 20  | 49 37  | 78 27  | 105 21 |
| 21      | 130 33 | 154 43 | 178 25 | 202 9  | 226 10 | 250 37 |        |
| Nov. 1  |        |        | 263 3  | 288 33 | 315 8  | 343 10 | 12 36  |
| 11      | 42 44  | 72 19  | 100 20 | 126 31 | 151 12 | 175 5  | 198 47 |
| 25      | 222 49 | 247 24 | 272 41 |        |        |        |        |
| Dec. 1  |        |        |        | 298 41 | 325 32 | 353 21 | 22 7   |
| 9       | 51 23  | 80 20  | 108 6  | 134 19 | 159 9  | 183 7  | 206 53 |
| 23      | 231 1  | 255 57 | 281 51 | 308 39 | 336 11 |        |        |

Ayanamṣa: 21° 52' 51"

## Longitudes of Planets

| 1963  | Sun          | Mars.   | Merc.   | Merc.   | Jupit. | Venus   | Saturn  | Rahu   |
|-------|--------------|---------|---------|---------|--------|---------|---------|--------|
| Jan.  | 8 284 25     | 144 6R  | 303 42  | 306 35  | 339 49 | 238 57  | 310 26  | 120 38 |
|       | 15 294 36    | 142 14  | 305 17R | 299 47R | 341 46 | 248 00  | 311 34  | 119 57 |
|       | 25 304 47    | 138 51  | 304 45  | 290 51  | 343 11 | 257 57  | 312 11  | 119 24 |
| Feb.  | 4 314 57     | 134 57  | 291 23D | 304 24  | 346 2  | 268 32  | 313 57  | 118 51 |
|       | 14 325 4     | 131 6   | 299 00  | 304 42  | 348 20 | 279 32  | 315 8   | 118 24 |
|       | 24 335 9     | 127 58  | 311 8   | 318 11  | 350 42 | 290 49  | 316 20  | 117 48 |
| March | 6 345 12     | 126 00R | 322 41  | 333 42  | 353 6  | 302 20  | 317 27  | 117 18 |
|       | 16 355 11    | 125 21  | 342 10  | 351 9   | 355 31 | 314 1   | 318 32  | 116 45 |
|       | 26 7 125 51D | 0 40    | 10 39   | 357 56  | 325 49 | 319 32  | 116 14  | 116 14 |
| April | 5 15 00      | 127 31  | 20 57   | 31 8    | 0 20   | 337 11  | 320 26  | 115 43 |
|       | 15 24 49     | 130 00  | 40 38   | 48 37   | 2 41   | 349 18  | 321 14  | 115 10 |
|       | 25 34 35     | 133 11  | 54 45   | 58 46   | 4 59   | 1 37    | 321 54  | 114 38 |
| May   | 5 44 18      | 138 56  | 60 31   | 60 6R   | 7 12   | 13 30   | 322 26  | 114 6  |
|       | 15 53 58     | 141 9   | 58 58R  | 55 6    | 9 18   | 25 43   | 322 49  | 113 34 |
|       | 25 11 35     | 145 44  | 52 48   | 51 44D  | 11 17  | 37 47   | 323 2   | 113 11 |
| June  | 4 73 11      | 150 37  | 52 33   | 55 12   | 13 7   | 49 54   | 323 7R  | 112 32 |
|       | 14 82 44     | 155 46  | 60 31   | 65 20   | 14 40  | 1 1     | 323 1   | 112 00 |
|       | 24 92 17     | 161 9   | 72 33   | 81 1    | 16 13  | 74 11   | 322 45  | 111 27 |
| July  | 4 101 49     | 166 43  | 90 45   | 101 17  | 17 20  | 86 22   | 322 21  | 110 57 |
|       | 14 111 21    | 172 29  | 112 3   | 122 32  | 18 24  | 98 35   | 321 50  | 110 24 |
|       | 24 120 14    | 178 24  | 132 27  | 141 40  | 19 3   | 110 51  | 321 12  | 109 52 |
| Aug.  | 3 130 27     | 184 27  | 150 10  | 157 44  | 19 25  | 123 9   | 320 11  | 109 15 |
|       | 13 140 2     | 190 40  | 165 1   | 171 26  | 19 28R | 135 29  | 319 44  | 108 53 |
|       | 23 149 39    | 197 00  | 176 22  | 180 31  | 19 10  | 147 51  | 319 00  | 108 17 |
| Sep.  | 1 159 19     | 203 29  | 184 11  | 188 8   | 18 36  | 160 14  | 318 20  | 107 41 |
|       | 12 169 1     | 210 5   | 194 29R | 179 21  | 17 40  | 172 11  | 317 40  | 107 13 |
|       | 22 178 46    | 216 48  | 174 11  | 170 51  | 16 32  | 185 6   | 317 9   | 106 41 |
| Oct.  | 1 188 35     | 223 39  | 171 24D | 175 17  | 15 19  | 197 33  | 316 55  | 106 10 |
|       | 12 198 26    | 230 37  | 182 41  | 190 48  | 13 54  | 210 00  | 316 32  | 105 38 |
|       | 22 208 22    | 237 42  | 199 11  | 207 45  | 12 36  | 222 28  | 316 27  | 105 6  |
| Nov.  | 1 218 20     | 244 53  | 216 6   | 224 14  | 11 30  | 234 56  | 316 33D | 104 34 |
|       | 11 228 22    | 252 11  | 232 13  | 240 1   | 10 31  | 247 24  | 315 41  | 104 3  |
|       | 21 238 27    | 259 32  | 247 48  | 255 26  | 9 52   | 259 52  | 317 15  | 103 31 |
| Dec.  | 1 248 34     | 267 4   | 263 00  | 270 11  | 9 35   | 272 19  | 317 49  | 103 00 |
|       | 11 258 42    | 274 41  | 277 29  | 283 52  | 9 36D  | 284 45  | 318 24  | 102 27 |
|       | 21 268 53    | 282 19  | 288 11  | 290 43  | 10 1   | 297 10  | 319 25  | 101 56 |
|       | 31 279 4     | 290 1   | 299 11R | 292 2R  | 10 41  | 309 33R | 320 22  | 101 24 |

Ayanamsa: 21° 53' 41"

## Longitude of the Moon

| 1963    | Sun.   | Tue.   | Thurs. | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  |        | 350 10 | 18 25  | 46 51  | 75 6   | 102 41 | 129 13 |
| 13      | 154 35 | 178 57 | 203 47 | 226 41 | 251 14 | 276 55 | 303 56 |
| 27      | 332 3  | 0 46   | 29 27  |        |        |        |        |
| Feb. 1  |        |        |        |        |        |        | 43 37  |
| 8       | 71 28  | 98 32  | 124 47 | 150 11 | 174 48 | 198 47 | 222 34 |
| 17      | 240 38 | 271 39 | 298 7  | 326 15 | 355 37 | 25 17  |        |
| March 1 |        |        |        |        |        |        | 54 17  |
| 3       | 82 3   | 108 34 | 134 7  | 158 ■  | 183 12 | 207 ■  | 230 51 |
| 17      | 254 52 | 279 43 | 306 3  | 334 14 | 4 3    | 34 26  | 64 3   |
| 31      | 92 6   |        |        |        |        |        |        |
| April 1 |        |        |        |        | 105 29 | 131 12 | 155 55 |
| 7       | 180 5  | 203 57 | 227 42 | 251 35 | 275 59 | 301 23 | 328 23 |
| 21      | 357 15 | 27 33  | 58 1   | 87 19  | 114 47 |        |        |
| May 1   |        |        |        |        |        | 140 32 | 165 7  |
| ■       | 189 5  | 212 50 | 236 40 | 260 46 | 285 23 | 310 54 | 337 45 |
| 19      | 6 15   | 36 5   | 66 19  | 95 39  | 123 19 | 149 15 | 173 54 |
| June 1  |        |        |        | 185 54 | 209 41 | 233 31 | 257 41 |
| 9       | 282 25 | 307 53 | 334 20 | 1 ■ 55 | 30 41  | 60 10  | 89 31  |
| 23      | 117 49 | 144 36 | 169 55 | 194 13 |        |        |        |
| July 1  |        |        |        |        | 218 1  | 241 56 | 266 22 |
| 7       | 292 7  | 317 48 | 344 52 | 12 44  | 41 11  | 69 54  | 98 23  |
| 21      | 126 5  | 152 36 | 177 54 | 202 13 | 226 2  | 249 59 |        |
| Aug. 1  |        |        | 262 12 | 287 20 | 313 41 | 341 9  | 9 26   |
| 11      | 37 57  | 66 18  | 94 14  | 121 31 | 147 59 | 174 1  | 1 ■ ■  |
| 25      | 222 5  | 245 51 | 270 4  | 295 21 |        |        |        |
| Sep. 1  | 308 33 | 336 8  | 4 57   | 34 14  | 63 5   | 91 3   | 118 3  |
| 15      | 144 12 | 169 36 | 194 19 | 218 22 | 242 4  | 265 53 | 290 28 |
| 29      | 316 30 |        |        |        |        |        |        |
| Oct. 1  |        | 344 22 | 13 49  | 43 53  | 73 22  | 101 32 | 128 15 |
| 13      | 153 54 | 178 45 | 203 3  | 226 55 | 250 34 | 274 17 | 298 54 |
| 27      | 324 41 | 352 25 | 22 3   |        |        |        |        |
| Nov. 1  |        |        |        |        |        |        | 37 12  |
| 3       | 67 40  | 97 4   | 124 47 | 150 55 | 175 51 | 200 4  | 223 53 |
| 17      | 247 34 | 271 19 | 295 30 | 320 33 | 347 4  | 15 22  | 45 14  |
| Dec. 1  | 75 42  | 105 27 | 133 35 | 159 57 | 184 54 | 208 58 | 232 40 |
| 15      | 256 23 | 280 24 | 304 57 | 330 19 | 355 50 | 24 41  | 53 51  |
| ■       | 83 41  | 113 14 |        |        |        |        |        |

Ayanamse: 21° 13' 41"

# RAMAN'S EPHEMERIS Longitudes of Planets

1964 A.D.

| 1964  | Sun       | Mars   | Mer.    | Mer.    | Jupit. | Venus  | Saturn  | Rahu   |
|-------|-----------|--------|---------|---------|--------|--------|---------|--------|
| Jan.  | 5 284 10  | 293 57 | 282 2R  | 276 26  | 11 10  | 315 43 | 320 53  | 101 16 |
|       | 15 294 21 | 301 46 | 274 31D | 276 ■   | 12 19  | 328 1  | 321 58  | 100 37 |
|       | 25 304 32 | 309 37 | 279 55  | 285 10  | 13 ■   | 340 14 | 323 7   | 100 4  |
| Feb.  | 4 314 42  | 317 30 | 291 18  | 298 2   | 15 22  | 352 21 | 324 18  | 99 33  |
|       | 14 324 49 | 325 25 | 305 14  | 312 50  | 17 11  | 4 19   | 325 30  | 99 2   |
|       | 24 334 55 | 333 19 | 320 49  | 329 13  | 19 10  | 16 7   | 326 43  | 98 29  |
| March | 5 344 57  | 341 12 | 338 3   | 348 19  | 21 16  | 27 42  | 327 54  | 97 58  |
|       | 15 354 56 | 349 5  | 357 2   | 7 00    | 23 30  | 38 59  | 329 3   | 97 25  |
|       | 25 ■ 52   | 356 54 | 16 53   | 25 57   | 25 ■   | 49 55  | 330 9   | 96 54  |
| April | ■ 14 45   | 4 41   | 33 25   | ■ 37    | 28 9   | 60 23  | 331 10  | 96 23  |
|       | 14 24 34  | 12 25  | 41 13   | 41 23   | 30 32  | 69 58  | 332 8   | 95 51  |
|       | 24 34 20  | 20 4   | 30 30R  | 35 47   | 32 56  | 79 12  | 332 56  | 95 18  |
| May   | 4 44 3    | 27 40  | ■ 2     | 31 ■    | 35 20  | 86 58  | 333 39  | 94 46  |
|       | 14 53 43  | 35 10  | 32 5D   | 34 ■    | 37 42  | 92 58  | 334 14  | 94 15  |
|       | 24 63 21  | 42 35  | 38 24   | 43 45   | 40 1   | 96 25  | 334 40  | 93 43  |
| June  | 8 72 56   | 49 55  | 50 20   | 58 ■    | 42 16  | 96 28R | 334 55  | 93 11  |
|       | 13 82 30  | 57 9   | ■ 53    | 76 44   | 44 26  | 92 30  | 335 2   | 92 40  |
|       | 23 92 3   | 64 17  | 87 20   | 98 15   | 46 30  | 86 27  | 335 00R | 92 8   |
| July  | 3 101 35  | 71 19  | 108 55  | 119 00  | 48 26  | 81 ■   | 334 47  | 91 36  |
|       | 13 111 7  | 78 15  | 128 16  | 136 45  | 50 13  | 80 26D | 334 25  | 91 ■   |
|       | 23 120 10 | 85 06  | 144 27  | 161 20  | 51 50  | 82 53  | 333 56  | ■ 33   |
| Aug.  | 2 130 13  | 91 50  | 157 17  | 162 12  | 53 13  | 88 10  | 333 19  | 90 00  |
|       | 12 139 48 | 98 28  | 165 49  | 167 44  | 54 22  | ■ 18   | 332 35R | 89 29  |
|       | 22 149 25 | 105 00 | 167 33R | 164 58R | 55 15  | 103 48 | 331 50  | 88 57  |
| Sep.  | 1 159 5   | 111 24 | 160 34  | 156 15  | 55 50  | 113 16 | 331 5   | 88 26  |
|       | 11 168 47 | 117 42 | 154 17  | 156 2   | 56 7   | 123 ■  | 330 24  | 87 54  |
|       | 21 178 32 | 123 51 | 161 12  | 168 ■   | 56 4R  | 134 ■  | 329 43  | 87 ■   |
| Oct.  | 1 188 20  | 129 53 | 177 19  | 186 15  | 55 40  | 145 11 | 329 9   | ■ 50   |
|       | 11 198 12 | 135 46 | 195 ■   | 203 ■   | 54 57  | 156 36 | 328 ■   | 86 18  |
|       | 21 208 7  | 141 28 | 211 58  | 220 2   | 53 58  | 168 17 | 328 28  | 85 40  |
|       | 31 218 6  | 146 59 | 227 52  | 235 32  | 52 47  | 180 10 | 328 21  | 85 15  |
| Nov.  | 10 228 8  | 152 17 | 243 2   | 250 20  | 51 27  | 192 13 | 328 25  | 84 44  |
|       | 20 238 12 | 157 19 | 257 22  | 263 56  | 50 6   | ■ 25   | 328 39  | 84 11  |
|       | ■ 248 19  | 162 00 | 269 ■   | 273 44  | 48 48  | 216 42 | 329 4   | 83 40  |
| Dec.  | 10 258 28 | 166 18 | 274 50R | 271 17  | 47 43  | 229 4  | 329 37  | 83 8   |
|       | 20 268 38 | 170 ■  | 264 49  | 259 40  | 46 51  | 241 30 | 330 19  | 82 36  |
|       | 30 278 50 | 173 23 | 258 44D | 261 15  | 46 ■   | 253 58 | 331 9   | ■ 3    |

Ayanamsa: 21° 54' 32"

## Longitude of the Moon

| 1964    | Sun.   | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  |        |        |        |        |        | 127 36 | 155 6  |
| 5       | 180 55 | 205 27 | 229 15 | 252 57 | 276 59 | 301 42 | 327 16 |
| 10      | 333 45 | 21 5   | 49 14  | 78 1   | 103 58 | 135 27 | 162 49 |
| Feb. 1  |        |        |        | 175 58 | 201 13 | 225 23 | 249 5  |
| 9       | 272 57 | 297 36 | 323 ■  | 350 12 | 17 54  | 46 1   | 74 15  |
| 23      | 102 24 | 130 17 | 157 33 | ■ 51   |        |        |        |
| March 1 | 190 34 | 221 11 | 245 2  | 268 45 | 292 59 | 318 24 | 345 20 |
| 15      | 13 31  | 42 20  | 71 2   | 99 11  | 126 39 | 153 ■  | 179 33 |
| 29      | 204 48 | 229 11 |        |        |        |        |        |
| April 1 |        |        |        |        |        | 241 9  | 264 48 |
| 5       | 288 38 | 313 25 | 339 42 | 7 43   | 37 2   | 66 41  | 95 42  |
| 19      | 123 35 | 150 22 | 176 13 | 201 16 | 225 39 | 249 30 |        |
| May 1   |        |        |        |        |        |        | 273 6  |
| 3       | 296 57 | 321 40 | 347 52 | 15 55  | 45 31  | 75 43  | 105 19 |
| 17      | 133 35 | 160 23 | 185 54 | 210 31 | 234 31 | 258 12 | 281 50 |
| 31      | 305 48 |        |        |        |        |        |        |
| June 1  |        |        |        |        | 318 3  | 343 25 | 10 20  |
| 7       | 38 59  | 68 57  | 99 13  | 123 39 | 156 30 | 182 40 | 207 ■  |
| 21      | 231 34 | 255 14 | 278 53 | 302 52 | 327 28 |        |        |
| July 1  |        |        |        |        |        | 353 00 | 19 48  |
| 5       | 48 3   | 77 32  | 107 34 | 137 2  | 165 6  | 191 21 | 216 19 |
| 19      | 240 15 | 263 52 | 287 40 | 312 1  | 337 7  | ■ ■    | ■ 2    |
| Aug. 1  |        |        |        | ■ 53   | 72 19  | 101 30 | 130 51 |
| 9       | 160 28 | 186 42 | 212 17 | 238 38 | 260 21 | 284 5  | 308 ■  |
| 23      | 333 40 | 359 53 | 26 57  | ■ 37   | 82 47  |        |        |
| Sep. 1  |        | 97 00  | 125 35 | 153 57 | 181 28 | 207 40 | ■ 33   |
| 13      | 256 28 | 280 9  | 304 13 | 329 18 | 355 41 | 23 9   | 51 18  |
| 27      | 79 37  | 107 48 |        |        |        |        |        |
| Oct. 1  |        |        | 135 45 | 163 16 | 190 ■  | 215 48 | 240 28 |
| 11      | 264 20 | 287 57 | 312 3  | 337 16 | 4 00   | 32 11  | 61 41  |
| 25      | 90 12  | 118 41 | 146 20 | 173 10 |        |        |        |
| Nov. 1  | 186 17 | 211 52 | 236 35 | 260 35 | 284 11 | 307 55 | 332 25 |
| 15      | 358 17 | 25 55  | 55 4   | ■ 58   | 114 32 | 143 ■  | 170 11 |
| 29      | 198 ■  |        |        |        |        |        |        |
| Dec. 1  |        | 221 3  | 245 18 | 269 5  | 292 39 | 315 25 | 340 51 |
| 13      | ■ 30   | 33 51  | 62 56  | 93 9   | 123 23 | 153 30 | 179 ■  |
| 27      | 205 38 | 230 18 | 254 12 |        |        |        |        |

Ayanamsa: 21° 54' 32"



## Longitudes of Planets

| 1965  | Sun       | Mars    | Merc.   | Merc.   | Jupit. | Venus  | Saturn  | Rahu  |
|-------|-----------|---------|---------|---------|--------|--------|---------|-------|
| Jan.  | 5 284 57  | 175 00R | 263 3   | 266 57  | 46 9R  | 261 27 | 331 43  | 81 46 |
|       | 15 285 8  | 177 00  | 272 56  | 279 34  | 46 9D  | 273 57 | 332 43  | 81 14 |
|       | 25 305 19 | 177 59  | 286 18  | 294 3   | 46 29  | 280 28 | 333 46  | 81 11 |
| Feb.  | 4 315 28  | 177 46  | 301 46  | 309 58  | 47 10  | 298 58 | 334 57  | 80 10 |
|       | 14 325 35 | 176 11  | 317 39  | 318 9   | 46 8   | 311 28 | 335 9   | 79 11 |
|       | 24 335 40 | 173 33  | 335 59  | 345 11  | 49 22  | 323 58 | 337 22  | 79 6  |
| March | 6 345 42  | 169 55  | 355 3   | 4 20    | 50 51  | 336 27 | 338 35  | 78 37 |
|       | 16 355 42 | 166 00  | 12 46   | 13 1    | 52 31  | 348 55 | 330 50  | 78 3  |
|       | 26 5 37   | 162 32  | 22 38   | 23 2R   | 54 22  | 1 21   | 340 57  | 77 11 |
| April | 5 13 30   | 160 1   | 20 43R  | 10 59   | 56 21  | 13 46  | 342 4   | 77 00 |
|       | 15 25 10  | 158 51  | 13 36   | 11 50   | 58 27  | 26 10  | 343 7   | 76 27 |
|       | 25 35 4   | 158 55D | 12 12   | 14 29D  | 60 39  | 38 32  | 344 5   | 75 55 |
| May   | 5 44 47   | 160 8   | 18 23D  | 23 36   | 62 54  | 50 52  | 344 56  | 75 24 |
|       | 15 54 27  | 162 19  | 29 56   | 37 15   | 65 13  | 63 10  | 345 41  | 74 52 |
|       | 25 64 4   | 165 19  | 45 31   | 54 24   | 67 33  | 75 28  | 346 17  | 74 20 |
| June  | 4 73 40   | 168 11  | 64 49   | 75 35   | 69 53  | 87 43  | 346 11  | 73 11 |
|       | 14 83 14  | 173 9   | 86 33   | 97 13   | 72 12  | 99 57  | 347 4   | 73 18 |
|       | 24 93 46  | 177 46  | 107 12  | 116 19  | 74 29  | 112 10 | 347 13  | 72 45 |
| July  | 4 102 18  | 182 46  | 126 32  | 131 50  | 76 43  | 124 22 | 347 12R | 72 13 |
|       | 14 111 50 | 184 6   | 138 9   | 143 22  | 78 54  | 136 31 | 347 00  | 71 12 |
|       | 24 121 23 | 193 42  | 147 16  | 149 35  | 80 58  | 143 39 | 346 40  | 71 1  |
| Aug.  | 3 130 57  | 200 9   | 149 58R | 148 11  | 83 1   | 160 44 | 346 11  | 70 39 |
|       | 13 140 13 | 205 37  | 144 38  | 140 34  | 84 11  | 172 11 | 345 35  | 70 1  |
|       | 23 150 4  | 211 54  | 137 55  | 138 10D | 86 25  | 184 44 | 344 54  | 69 34 |
| Sep.  | 2 159 49  | 218 22  | 141 41  | 141 6   | 87 53  | 196 38 | 344 8   | 69 00 |
|       | 12 169 31 | 225 00  | 148 26  | 165 37  | 89 8   | 208 27 | 343 11  | 68 31 |
|       | 22 179 16 | 231 48  | 174 57  | 184 04  | 90 6   | 220 9  | 342 38  | 68 00 |
| Oct.  | 2 189 5   | 238 55  | 192 52  | 201 18  | 90 50  | 231 45 | 342 00  | 67 24 |
|       | 12 198 57 | 245 51  | 209 23  | 217 11  | 91 14  | 243 11 | 341 23  | 66 53 |
|       | 22 208 32 | 253 4   | 224 44  | 232 00  | 91 19R | 254 25 | 340 56  | 66 24 |
| Nov.  | 1 218 51  | 260 25  | 238 58  | 245 32  | 91 1   | 265 22 | 340 38  | 65 53 |
|       | 11 228 53 | 267 53  | 251 29  | 256 11  | 90 28  | 275 57 | 340 30  | 65 21 |
|       | 21 238 11 | 275 27  | 258 51  | 258 3R  | 89 35  | 285 59 | 340 32D | 64 49 |
| Dec.  | 1 248 1   | 283 7   | 263 2   | 246 29  | 88 28  | 295 14 | 340 11  | 64 18 |
|       | 11 259 14 | 290 53  | 243 00  | 243 50D | 87 11  | 303 18 | 341 9   | 63 46 |
|       | 21 269 25 | 298 39  | 247 43D | 253 17  | 85 49  | 309 36 | 341 11  | 63 14 |
|       | 31 279 36 | 306 30  | 259 45  | 266 44  | 84 30  | 313 18 | 342 25  | 62 42 |

Ayanamasa: 21° 55' 11"

1965 A.D.

## RAMAN'S EPHEMERIS

151

## Longitude of the Moon

|       | 1965 | Sun    | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|-------|------|--------|--------|--------|--------|--------|--------|--------|
| Jan.  | 1    |        |        |        |        |        |        | 264 1  |
|       | 3    | 289 37 | 313 11 | 337 11 | 2 37   | 28 50  | 54 35  | 85 55  |
|       | 17   | 116 13 | 146 19 | 175 1  | 501 55 | 227 6  | 541 8  | 274 44 |
|       | 31   | 208 20 |        |        |        | 310 20 | 334 41 | 359 39 |
| Feb.  | 1    |        |        |        |        | 189 51 | 168 48 | 196 47 |
|       | 7    | 25 26  | 52 14  | 116 16 | 110 1  |        |        |        |
|       | 21   | 222 56 | 247 34 | 271 20 | 294 57 |        |        |        |
| March | 1    |        |        |        |        | 318 11 | 343 44 | 9 19   |
|       | 7    | 35 40  | 111 45 | 90 30  | 119 11 | 148 13 | 176 55 | 204 38 |
|       | 21   | 230 45 | 255 27 | 279 18 | 303 1  | 327 12 | 352 19 |        |
| April | 1    |        |        | 118 18 | 31 1   | 59 29  | 87 50  | 115 39 |
|       | 11   | 143 58 | 172 1  | 199 33 | 225 55 | 251 1  | 279 16 | 298 59 |
|       | 25   | 322 55 | 347 39 | 13 38  |        |        |        |        |
| May   | 1    |        |        |        | 40 57  | 93 17  | 98 1   | 124 37 |
|       | 9    | 154 46 | 182 11 | 208 48 | 234 11 | 260 14 | 286 17 | 306 59 |
|       | 23   | 330 55 | 355 39 | 21 47  | 49 19  | 78 17  |        |        |
| June  | 1    |        | 93 1   | 122 34 | 151 25 | 179 7  | 206 38 | 231 1  |
|       | 13   | 255 44 | 279 48 | 303 32 | 327 17 | 351 31 | 16 45  | 41 29  |
|       | 27   | 71 55  | 101 43 |        |        |        |        |        |
| July  | 1    |        |        | 131 50 | 161 20 | 189 13 | 215 31 | 240 33 |
|       | 11   | 264 47 | 288 35 | 312 17 | 336 8  | 0 28   | 25 36  | 52 1   |
|       | 25   | 90 20  | 110 7  | 140 34 | 170 24 |        |        |        |
| Aug.  | 1    | 184 44 | 211 18 | 237 29 | 261 51 | 285 38 | 309 19 | 333 12 |
|       | 15   | 357 29 | 22 23  | 48 11  | 75 17  | 102 55 | 133 51 | 154 2  |
|       | 29   | 193 14 | 220 36 |        |        |        |        |        |
| Sep.  | 1    |        |        |        |        |        | 233 37 | 258 31 |
|       | 5    | 282 28 | 309 9  | 330 3  | 354 26 | 1 27   | 45 9   | 71 43  |
|       | 19   | 90 23  | 128 12 | 157 44 | 187 5  | 215 14 | 241 44 |        |
| Oct.  | 1    |        |        |        |        |        |        | 304 42 |
|       | 3    | 290 42 | 314 27 | 338 29 | 2 11   | 58 48  | 55 12  | 82 18  |
|       | 17   | 110 6  | 138 31 | 167 15 | 193 44 | 221 11 | 249 54 | 274 31 |
|       | 31   | 259 16 |        |        |        |        |        |        |
| Nov.  | 1    |        |        |        |        | 310 28 | 334 20 | 358 45 |
|       | 7    | 24 17  | 50 58  | 78 36  | 106 50 | 135 16 | 163 34 | 191 50 |
|       | 21   | 218 36 | 244 51 | 270 7  | 294 28 | 318 18 |        |        |
| Dec.  | 1    |        |        |        |        |        | 342 8  | 6 33   |
|       | 5    | 11 1   | 40 10  | 87 39  | 116 51 | 146 1  | 174 25 | 201 49 |
|       | 19   | 228 10 | 253 41 | 279 27 | 302 37 | 326 24 | 351 10 | 14 50  |

Ayanamasa: 21° 55' 22"

# RAMAN'S EPHEMERIS Longitudes of Planets

1966 A.D.

|       | 1966 | Sun    | Mars   | Mer.    | Mer.    | Jupit.  | Venus   | Saturn  | Rahu  |
|-------|------|--------|--------|---------|---------|---------|---------|---------|-------|
| Jan.  | 5    | 284 42 | 310 26 | 266 43  | 274 1   | 83 54R  | 313 49  | 342 41  | 62 53 |
|       | 15   | 294 53 | 318 19 | 281 22  | 172 17  | 82 48   | 311 50R | 343 41  | 61 52 |
|       | 25   | 305 4  | 326 13 | 297 16  | 305 30  | 81 58   | 306 28  | 344 41  | 61 21 |
| Feb.  | 4    | 315 13 | 334 7  | 314 2   | 322 52  | 81 27   | 300 51  | 345 46  | 60 51 |
|       | 14   | 325 20 | 342 00 | 331 57  | 341 10  | 81 15   | 298 17  | 346 55  | 60 18 |
|       | 24   | 335 26 | 349 51 | 350 5   | 357 53  | 81 24D  | 299 41D | 348 7   | 59 46 |
| March | 6    | 345 23 | 357 39 | 25      | 5 41    | 81 52   | 304 18  | 349 20  | 59 15 |
|       | 16   | 355 27 | 5 24   | 24R     | 0 35    | 82 37   | 311 10  | 350 34  | 58 43 |
|       | 26   | 5 23   | 13 5   | 356 13  | 353 4   | 81 41   | 310 31  | 351 48  | 58 11 |
| April | 5    | 15 15  | 20 42  | 352 50D | 354 26  | 81 58   | 328 53  | 352 59  | 57 40 |
|       | 15   | 25 4   | 28 14  | 357 51  | 39      | 86 28   | 338 55  | 354 12  | 57 4  |
|       | 25   | 34 50  | 35 42  | 8 34    | 11 24   | 88 9    | 349 27  | 355 14  | 56 36 |
| May   | 5    | 44 33  | 43 4   | 25 5    | 31 34   | 89 59   | 0 21    | 356 13  | 56 14 |
|       | 15   | 54 13  | 50 22  | 51      | 50 55   | 91 57   | 11 30   | 357 7   | 52 22 |
|       | 25   | 63 51  | 57 24  | 61 38   | 72 7    | 94 00   | 22 50   | 357 54  | 55 00 |
| June  | 4    | 73 26  | 64 41  | 82 48   | 93 17   | 96 9    | 33 20   | 358 34  | 54 20 |
|       | 14   | 83 00  | 71 42  | 101 45  | 102 18  | 98 21   | 45 57   | 359 4   | 53 58 |
|       | 24   | 92 33  | 78 38  | 117 12  | 117 12  | 100 35  | 57 40   | 359 27  | 53 25 |
| July  | 4    | 102 5  | 85 29  | 127 23  | 130 17  | 102 51  | 69 29   | 359 39  | 52 53 |
|       | 14   | 111 37 | 92 16  | 131 24  | 130 32R | 105 6   | 81 22   | 359 41R | 52 22 |
|       | 24   | 121 10 | 98 58  | 127 54R | 127 54  | 107 21  | 93 21   | 359 33  | 51 50 |
| Aug.  | 4    | 130 43 | 105 36 | 121 22  | 120 21  | 109 32  | 105 24  | 359 15R | 51 18 |
|       | 13   | 140 18 | 112 9  | 122 5D  | 127 53  | 111 41  | 117 31  | 358 49  | 50 46 |
|       | 23   | 149 56 | 118 37 | 133 41  | 142 27  | 113 45  | 129 44  | 358 14  | 50 14 |
| Sep.  | 2    | 159 35 | 125 1  | 152 4   | 161 47  | 115 42  | 142 00  | 357 36  | 49 40 |
|       | 12   | 169 17 | 131 20 | 171 13  | 180 16  | 117 33  | 154 21  | 356 49  | 49 5  |
|       | 22   | 179 3  | 137 35 | 188 51  | 197 3   | 119 13  | 166 44  | 356 3   | 48 39 |
| Oct.  | 1    | 187 52 | 143 8  | 203 19  | 210 51  | 120 35  | 177 57  | 355 22  | 48 10 |
|       | 11   | 197 44 | 149 14 | 218 1   | 224 47  | 121 53  | 190 25  | 354 39  | 47 39 |
|       | 21   | 207 29 | 155 14 | 231 3   | 236 33  | 122 58  | 202 55  | 354 1   | 47 7  |
| Nov.  | 31   | 217 37 | 161 9  | 240 51  | 243 7   | 123 46  | 215 27  | 353 30  | 46 34 |
|       | 10   | 227 38 | 169 56 | 242 21R | 237 14  | 124 17  | 228 00  | 353 9   | 46 4  |
|       | 20   | 237 43 | 172 35 | 230 48  | 227 17  | 124 29  | 240 34  | 352 57  | 45 31 |
| Dec.  | 30   | 247 49 | 178 5  | 228 18D | 232 31  | 124 21R | 251 2   | 352 50D | 45 00 |
|       | 10   | 257 58 | 183 25 | 238 17  | 245 11  | 125 54  | 265 42  | 353 5   | 44 29 |
|       | 20   | 268 9  | 188 23 | 252 11  | 259 51  | 123 7   | 278 16  | 353 25  | 43 57 |
| Dec.  | 30   | 279 21 | 193 55 | 261 38  | 276 57  | 121 58  | 292 4   | 353 59  | 43 25 |

Ayanamsa: 21° 56' 12"

## Longitude of the Moon

|       | 1966 | Sun.   | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|-------|------|--------|--------|--------|--------|--------|--------|--------|
| Jan.  | 1    |        |        |        | 26 59  | 53 11  | 81 9   | 110 42 |
|       | 9    | 140 53 | 170 28 | 198 37 | 225 13 | 250 37 | 275 12 | 299 17 |
|       | 23   | 323 6  | 346 49 | 10 46  | 30 25  | 61 19  |        |        |
| Feb.  | 1    |        | 74 56  | 103 39 | 133 47 | 164 28 | 194 00 | 221 41 |
|       | 13   | 247 36 | 272 18 | 296 10 | 320 4  | 343 50 | 7 47   | 32 8   |
|       | 27   | 57 19  |        |        |        |        |        |        |
| March | 1    |        | 83 51  | 112 8  | 142 0  | 172 31 | 202 17 | 230 19 |
|       | 13   | 256 18 | 281 13 | 305 9  | 328 52 | 348 43 | 16 56  | 41 42  |
|       | 27   | 67 12  | 93 47  | 121 43 |        |        |        |        |
| April | 1    |        |        |        |        |        |        | 136 12 |
|       | 3    | 165 52 | 195 39 | 224 30 | 251 41 | 277 15 | 301 38 | 325 27 |
|       | 17   | 349 16 | 13 30  | 38 25  | 64 14  | 90 42  | 118 12 | 146 32 |
| May   | 1    | 175 27 | 204 23 | 232 36 | 259 34 | 285 10 | 309 11 | 333 30 |
|       | 15   | 357 23 | 21 48  | 47 11  | 73 35  | 100 59 | 129 5  | 157 30 |
|       | 29   | 185 54 |        |        |        |        |        |        |
| June  | 1    |        |        |        |        |        | 227 43 | 254 39 |
|       | 5    | 280 32 | 305 25 | 329 32 | 353 20 | 17 28  | 42 28  | 69 14  |
|       | 19   | 96 27  | 125 9  | 154 7  | 182 43 | 210 31 | 297 29 |        |
| July  | 1    |        |        |        |        |        |        | 263 38 |
|       | 3    | 289 00 | 313 37 | 337 37 | 1 22   | 25 25  | 50 24  | 76 53  |
|       | 17   | 105 6  | 134 36 | 164 20 | 193 20 | 221 3  | 247 33 | 273 8  |
|       | 31   | 297 58 |        |        |        |        |        |        |
| Aug.  | 1    |        |        |        |        | 310 8  | 334 11 | 357 55 |
|       | 7    | 21 42  | 46 3   | 71 38  | 99 00  | 128 13 | 158 30 | 188 35 |
|       | 21   | 217 20 | 244 27 | 270 11 | 294 57 | 319 8  | 342 59 |        |
| Sep.  | 1    |        |        | 354 50 | 18 35  | 42 37  | 67 29  | 93 46  |
|       | 11   | 121 52 | 151 39 | 182 10 | 212 3  | 240 19 | 266 49 | 291 56 |
|       | 25   | 316 11 | 340 00 | 3 44   |        |        |        |        |
| Oct.  | 1    |        |        |        | 27 37  | 51 56  | 77 00  | 103 14 |
|       | 9    | 131 00 | 160 16 | 190 24 | 220 12 | 248 41 | 275 26 | 300 39 |
|       | 23   | 324 52 | 348 37 | 12 24  | 36 34  | 61 22  |        |        |
| Nov.  | 1    |        | 74 3   | 100 11 | 127 11 | 155 18 | 184 21 | 213 43 |
|       | 13   | 242 34 | 270 10 | 296 15 | 320 59 | 344 56 | 8 40   | 32 46  |
|       | 27   | 57 38  | 83 40  |        |        |        |        |        |
| Dec.  | 1    |        |        | 110 19 | 137 53 | 166 00 | 194 11 | 222 50 |
|       | 11   | 250 51 | 278 4  | 304 2  | 328 49 | 352 40 | 16 29  | 40 37  |
|       | 25   | 65 11  | 91 20  | 121 11 | 148 29 |        |        |        |

Ayanamsa: 21° 56' 12"

## Longitudes of Planets

| 1967  | Sun       | Mars    | Merc.   | Merc.   | Jupit.  | Venus   | Saturn | Rahu  |
|-------|-----------|---------|---------|---------|---------|---------|--------|-------|
| Jan.  | ■ 284 27  | 196 11  | 276 57  | ■ 53    | 121 23R | 298 21  | 354 18 | 43 6  |
|       | 15 294 38 | 200 31  | 292 00  | 301 20  | 120 6   | 310 53  | 355 2  | 42 35 |
|       | 25 304 ■  | 205 25  | ■ 52    | 318 36  | 118 45  | 323 24  | 355 55 | 42 2  |
| Feb.  | ■ 314 58  | 207 47  | 327 22  | ■ 45    | 117 28  | 335 52  | 356 54 | 41 30 |
|       | 14 325 6  | 210 28  | 342 57  | ■ 10    | 116 20  | 348 19  | 357 58 | 40 58 |
|       | ■ 335 11  | 212 ■   | 348 38R | 345 44R | 115 25  | 0 42    | 359 ■  | 40 26 |
| March | 6 ■ 13    | 213 9   | 341 48  | 336 31  | 114 47  | 13 00   | 0 19   | 39 55 |
|       | 16 355 13 | 212 49R | 334 36  | 335 16D | 114 29  | 25 14   | 1 33   | 39 24 |
|       | ■ 5 9     | 211 11  | 337 1D  | 342 18  | 114 28D | 37 22   | 2 48   | 38 52 |
| April | 5 15 1    | 208 24  | 347 45  | 354 9   | 114 48  | 49 24   | 4 2    | 38 20 |
|       | ■ 24 50   | 204 49  | 1 29    | 9 14    | 115 24  | 61 18   | 5 16   | 37 48 |
|       | 25 34 36  | 200 ■   | 17 49   | 27 7    | 116 18  | 73 ■    | 6 26   | 37 15 |
| May   | 5 44 19   | 197 53  | 37 7    | 47 43   | 117 27  | ■ 35    | 7 33   | 36 45 |
|       | 15 53 59  | 195 47  | 58 36   | 69 14   | 118 49  | 95 56   | 8 36   | 35 12 |
|       | 25 ■ 37   | 195 00  | 79 8    | 79 8    | 120 21  | 108 59  | 9 32   | 35 40 |
| June  | 4 73 12   | 195 30  | 95 35   | 101 54  | 122 ■   | 117 42  | 10 23  | 35 5  |
|       | ■ 82 46   | 197 11  | 107 50  | 110 13  | 123 54  | 127 58  | 11 ■   | 34 37 |
|       | 24 92 19  | 199 51  | 111 51  | 111 36R | 125 52  | 137 38  | 11 41  | 34 5  |
| July  | ■ 101 51  | 203 21  | 109 36R | 108 ■   | 127 54  | 146 27  | 12 6   | 33 34 |
|       | ■ 111 ■   | 207 30  | 103 45  | 102 ■   | 130 ■   | 164 5   | 12 22  | 32 2  |
|       | 24 120 ■  | 212 12  | 102 2D  | 106 10  | 132 10  | 160 00  | 12 28  | 32 30 |
| Aug.  | 3 130 29  | 217 24  | 111 41  | 119 17  | 134 ■   | 163 28  | 12 24R | 31 58 |
|       | 13 140 ■  | 222 58  | 127 56  | 138 24  | 136 34  | 163 26R | 12 9   | 31 27 |
|       | 23 149 41 | 228 53  | 148 ■   | ■ 15    | 139 50  | 169 37  | 11 45  | 0 55  |
| Sep.  | 2 159 21  | 235 07  | 167 31  | 176 17  | 140 54  | 153 39  | 11 13  | 30 22 |
|       | 12 169 ■  | 241 36  | 184 33  | 192 22  | 141 1   | 148 54  | 10 34  | 29 51 |
|       | 22 178 48 | 248 18  | 199 44  | ■ ■     | 145 ■   | 147 44D | 9 49   | 29 20 |
| Oct.  | 2 ■ 37    | 255 13  | 213 00  | 218 42  | 147 00  | 150 18  | 8 3    | 28 45 |
|       | 12 198 29 | ■ 19    | 223 22  | 223 22  | 148 49  | 155 45  | 8 16   | ■ 16  |
|       | 22 208 ■  | ■ 34    | 227 12R | 224 30  | 150 30  | 163 12  | 7 32   | 27 43 |
| Nov.  | 1 218 22  | 276 57  | 218 42  | 213 8   | 152 00  | 172 1   | 6 53   | 27 13 |
|       | 11 228 24 | ■ 27    | 211 32D | 214 13  | 153 17  | 181 50  | 6 20   | 26 42 |
|       | 21 238 29 | 292 ■   | 219 38  | 226 26  | 154 21  | 192 20  | 5 56   | 25 10 |
| Dec.  | 1 248 ■   | 299 45  | 233 48  | 241 25  | 155 9   | 203 22  | 5 42   | 25 37 |
|       | 11 258 ■  | 307 28  | 249 ■   | 256 54  | 155 39  | 214 45  | 5 39D  | 25 6  |
|       | 21 ■ ■    | 315 15  | ■ 43    | 272 36  | 155 50  | ■ 25    | 5 47   | ■ ■   |
|       | 31 279 ■  | 323 3   | 280 ■   | 288 ■   | 155 42R | 238 17  | 6 5    | 24 1  |

Ayanamsa: 21° 57' 03°

## Longitude of the Moon

| 1967    | Sun.   | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  | 162 46 | 181 9  | 219 5  | 246 32 | 273 21 | 209 24 | 324 30 |
| 15      | 358 42 | 12 24  | 36 11  | 60 46  | 86 46  | 114 29 | 143 31 |
| 29      | 172 27 | 201 52 |        |        |        |        |        |
| Feb. 1  |        |        |        |        |        | 215 58 | 243 23 |
| 5       | 269 54 | 295 36 | 320 ■  | 344 57 | 8 44   | 32 19  | 56 20  |
| 19      | 81 26  | 108 16 | 136 ■  | 166 56 | 196 59 |        |        |
| March 1 |        |        |        |        |        | 226 2  | 253 39 |
| 5       | 279 54 | 305 8  | 329 39 | 353 37 | 17 18  | 40 54  | 64 56  |
| 19      | ■ 58   | 116 34 | 145 2  | 175 2  | 205 28 | 235 5  | 263 7  |
| April 1 |        |        |        | 276 29 | 302 ■  | 326 43 | 350 39 |
| 9       | 14 18  | 37 57  | 61 56  | 86 34  | 112 19 | 139 35 | 168 27 |
| ■       | 198 27 | 228 35 | 257 45 | 285 16 |        |        |        |
| May 1   |        |        |        |        | 311 5  | 335 38 | 359 26 |
| 7       | 23 ■   | 46 51  | 71 12  | 96 18  | 122 21 | 149 32 | 177 55 |
| 21      | 207 14 | 236 51 | 265 51 | 293 28 | 319 26 | 344 2  |        |
| June 1  |        |        | 355 59 | 19 37  | 43 24  | 68 19  | 93 5   |
| 11      | 119 18 | 146 22 | 174 10 | 202 35 | 231 23 | 260 5  | 288 1  |
| 25      | 314 39 | 339 53 | 4 1    |        |        |        |        |
| July 1  |        |        |        | 27 41  | 51 35  | 76 17  | 102 10 |
| 9       | 129 9  | 156 56 | 185 7  | 213 22 | 241 32 | 269 25 | 296 39 |
| 23      | 322 50 | 347 31 | 11 56  | 35 35  | 59 32  |        |        |
| Aug. 1  |        | 71 49  | 97 22  | 123 24 | 152 39 | 181 27 | 210 29 |
| 13      | 238 19 | 265 51 | 292 41 | 318 43 | 343 50 | ■ 5    | 31 48  |
| 27      | 55 28  | 79 47  | 105 24 |        |        |        |        |
| Sep. 1  |        |        |        |        |        |        | 118 51 |
| 3       | 146 57 | 176 17 | 205 52 | 234 51 | 262 46 | 289 35 | 315 23 |
| 17      | 340 21 | 4 37   | 28 22  | 51 57  | 76 51  | 100 40 | 126 59 |
| Oct. 1  | 165 ■  | 184 41 | 214 52 | 244 30 | 272 47 | 299 33 | 325 00 |
| 15      | 349 30 | 13 24  | 37 ■   | 60 41  | 84 43  | 109 32 | 135 38 |
| 29      | 163 23 | 192 44 |        |        |        |        |        |
| Nov. 1  |        |        |        |        |        | 207 50 | 238 11 |
| ■       | 267 43 | 295 37 | 321 44 | 346 29 | 10 24  | 34 00  | 57 42  |
| 19      | 81 46  | 108 22 | 131 59 | 158 39 | 186 ■  | 216 ■  |        |
| Dec. 1  |        |        |        |        |        |        | 246 10 |
| ■       | 275 47 | 303 58 | 330 19 | 355 6  | 18 57  | 42 31  | 66 23  |
| 17      | 90 52  | 116 6  | 142 6  | 168 55 | 196 39 | 225 18 | 254 37 |
| 31      | 290 49 |        |        |        |        |        |        |

Ayanamsa: 21° 57' 03"

## Longitudes of Planets

|       | 1968 | Sun    | Mars   | Mer.    | Merc.   | Jupit.  | Venus  | Saturn | Rahu  |
|-------|------|--------|--------|---------|---------|---------|--------|--------|-------|
| Jan.  | 5    | 284 12 | 326 57 | 288 44  | 296 59  | 155 32R | 244 11 | 6 19   | 23 46 |
|       | 15   | 294 14 | 334 41 | 305 20  | 313 15  | 154 54  | 256 20 | 6 12   | 23 15 |
|       | 25   | 304 11 | 342 17 | 321 14  | 327 59  | 154 11  | 268 29 | 7 24   | 22 42 |
| Feb.  | 4    | 314 44 | 350 17 | 331 49  | 331 32R | 152 56  | 280 43 | 8 24   | 22 12 |
|       | 14   | 324 51 | 357 59 | 327 17  | 321 43  | 151 40  | 292 59 | 8 24   | 21 40 |
|       | 24   | 334 57 | 5 37   | 317 58  | 317 10D | 150 21  | 305 17 | 10 27  | 21 8  |
| March | 5    | 344 50 | 13 8   | 318 57  | 322 36  | 149 11  | 317 36 | 11 36  | 20 35 |
|       | 15   | 354 24 | 20 43  | 327 35  | 333 33  | 147 56  | 329 55 | 12 48  | 20 3  |
|       | 25   | 4 54   | 28 10  | 340 16  | 347 39  | 147 00  | 342 15 | 14 2   | 19 31 |
| April | 4    | 14 47  | 35 32  | 355 42  | 4 19    | 146 18  | 354 34 | 15 17  | 19 1  |
|       | 14   | 24 36  | 42 48  | 13 34   | 23 25   | 145 55  | 6 53   | 16 33  | 18 24 |
|       | 24   | 34 22  | 50 00  | 33 21   | 44 34   | 145 50D | 19 12  | 17 48  | 17 56 |
| May   | 4    | 44 5   | 57 7   | 55 5    | 64 43   | 146 5   | 31 10  | 19 00  | 17 25 |
|       | 14   | 52 45  | 64 9   | 73 19   | 70 23   | 146 30  | 43 47  | 20 9   | 16 11 |
|       | 24   | 63 23  | 71 36  | 85 54   | 85 11   | 147 24  | 56 11  | 21 14  | 16 21 |
| June  | 3    | 72 58  | 78 00  | 91 43   | 91 49   | 148 26  | 68 20  | 22 14  | 15 49 |
|       | 13   | 82 32  | 84 48  | 90 13R  | 87 31   | 149 42  | 80 37  | 23 7   | 15 18 |
|       | 23   | 92 11  | 91 32  | 101 53  | 83 22   | 151 10  | 92 54  | 23 54  | 14 52 |
| July  | 3    | 101 37 | 98 13  | 114 1D  | 86 3    | 152 48  | 105 11 | 24 32  | 14 15 |
|       | 13   | 111 9  | 104 51 | 90 28   | 96 49   | 154 33  | 116 59 | 25 2   | 13 42 |
|       | 23   | 120 49 | 112 11 | 104 55  | 114 24  | 156 27  | 129 48 | 25 22  | 13 11 |
| Aug.  | 1    | 130 15 | 117 56 | 124 39  | 135 2   | 158 11  | 142 6  | 25 32  | 12 11 |
|       | 12   | 139 50 | 124 23 | 145 6   | 154 37  | 160 30  | 154 24 | 26 31R | 12 7  |
|       | 22   | 149 27 | 130 49 | 166 32  | 171 52  | 162 36  | 166 41 | 25 21  | 11 34 |
| Sep.  | 1    | 159 7  | 137 11 | 179 41  | 189 57  | 164 45  | 179 3  | 25 00  | 11 2  |
|       | 11   | 168 49 | 143 31 | 193 37  | 199 38  | 166 55  | 191 11 | 24 31  | 10 32 |
|       | 21   | 178 34 | 149 49 | 204 49  | 208 11  | 169 6   | 203 37 | 23 53  | 10 00 |
| Oct.  | 1    | 188 11 | 156 5  | 211 00  | 210 41R | 171 13  | 216 53 | 23 10  | 9 27  |
|       | 11   | 198 14 | 162 19 | 207 11R | 201 20  | 173 19  | 228 11 | 22 23  | 8 56  |
|       | 21   | 208 9  | 168 11 | 226 38  | 171 4D  | 175 20  | 240 20 | 21 36  | 8 24  |
|       | 31   | 218 8  | 174 45 | 199 36D | 205 45  | 177 15  | 252 31 | 20 11  | 7 52  |
| Nov.  | 10   | 228 9  | 180 11 | 213 5   | 220 55  | 179 5   | 264 40 | 20 11  | 7 20  |
|       | 20   | 238 14 | 186 49 | 221 51  | 236 11  | 180 45  | 276 45 | 19 11  | 6 50  |
|       | 30   | 248 21 | 192 48 | 244 41  | 252 33  | 182 14  | 288 11 | 19 6   | 6 17  |
| Dec.  | 10   | 258 30 | 198 11 | 260 11  | 268 17  | 183 11  | 300 40 | 18 11  | 5 47  |
|       | 20   | 268 11 | 204 35 | 276 18  | 284 11  | 184 34  | 312 25 | 17 42  | 5 14  |
|       | 30   | 278 52 | 210 20 | 292 10  | 301 19  | 182 22  | 323 57 | 18 46D | 4 42  |

Ayanamsa: 21° 57' 53"



## Longitude of the Moon

| 1968    | Sun.   | Tue.   | Thurs. | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  |        |        |        |        | 297 59 | 325 11 | 350 51 |
| 7       | 15 10  | 38 50  | 62 34  | 86 58  | 112 21 | 138 42 | 165 48 |
| 21      | 193 26 | 221 29 | 249 52 | 278 18 | 306 14 | 333 6  |        |
| Feb. 1  |        |        | 346 1  | 10 53  | 34 48  | 58 27  | 82 33  |
| 11      | 107 39 | 134 3  | 161 36 | 189 51 | 218 17 | 245 11 | 274 29 |
| 25      | 301 53 | 328 30 | 354 8  |        |        |        |        |
| March 1 |        |        |        |        |        |        | 6 33   |
| 3       | 30 45  | 54 27  | 78 14  | 102 45 | 128 35 | 155 58 | 184 39 |
| 17      | 213 57 | 243 3  | 271 22 | 299 42 | 325 1  | 350 58 | 14 59  |
| 31      | 38 58  |        |        |        |        |        |        |
| April 1 |        |        |        |        | 50 48  | 74 28  | 98 31  |
| 7       | 123 32 | 150 1  | 178 13 | 207 48 | 237 53 | 267 20 | 295 27 |
| 21      | 322 3  | 347 24 | 11 51  | 35 45  | 59 25  |        |        |
| May 1   |        |        |        |        |        | 83 8   | 107 15 |
| 5       | 132 11 | 158 27 | 186 25 | 215 30 | 245 25 | 276 25 | 304 56 |
| 19      | 331 39 | 356 47 | 20 58  | 44 39  | 68 18  | 92 10  | 116 30 |
| June 1  |        |        |        | 128 54 | 154 27 | 181 18 | 209 44 |
| 9       | 239 34 | 269 55 | 299 19 | 327 19 | 353 17 | 17 50  | 41 38  |
| 23      | 65 15  | 89 20  | 113 34 | 138 36 |        |        |        |
| July 1  |        |        |        |        | 164 26 | 191 17 | 219 21 |
| 7       | 248 37 | 278 26 | 307 45 | 335 34 | 1 36   | 26 14  | 50 3   |
| 21      | 73 46  | 97 52  | 122 42 | 148 19 | 174 42 | 201 51 |        |
| Aug. 1  |        |        | 215 44 | 244 6  | 273 4  | 302 00 | 330 6  |
| 11      | 356 47 | 22 2   | 46 13  | 69 58  | 93 56  | 118 38 | 143 52 |
| 25      | 171 5  | 198 36 | 226 39 | 254 59 |        |        |        |
| Sep. 1  | 269 12 | 297 28 | 325 11 | 351 56 | 17 32  | 42 6   | 65 59  |
| 15      | 89 47  | 114 7  | 139 29 | 166 12 | 194 8  | 232 51 | 251 41 |
| 29      | 280 9  |        |        |        |        |        |        |
| Oct. 1  |        | 307 53 | 334 46 | 0 43   | 25 49  | 50 9   | 74 00  |
| 13      | 97 47  | 122 1  | 147 20 | 174 12 | 202 40 | 232 13 | 261 54 |
| 27      | 290 47 | 318 22 | 344 40 |        |        |        |        |
| Nov. 1  |        |        |        |        |        |        | 357 26 |
| 3       | 22 20  | 46 37  | 70 31  | 94 14  | 118 8  | 142 43 | 168 33 |
| 17      | 196 8  | 225 29 | 255 52 | 285 58 | 314 40 | 341 36 | 7 2    |
| Dec. 1  | 31 31  | 55 30  | 79 15  | 103 3  | 127 2  | 151 36 | 177 14 |
| 15      | 204 26 | 233 30 | 263 53 | 294 21 | 323 31 | 350 45 | 16 13  |
| 29      | 40 34  | 64 21  |        |        |        |        |        |

Ayanamasa : 21° 57' 53"

## Longitudes of Planets

|       | 1969 | Sun    | Mars.   | Merc.   | Mero.   | Jupit. | Venus  | Saturn | Rahu   |
|-------|------|--------|---------|---------|---------|--------|--------|--------|--------|
| Jan.  | 5    | 284 59 | 213 44  | 301 29  | 111 31  | 185 42 | 330 45 | 18 54  | 4 21   |
|       | 15   | 295 10 | 219 18  | 313 53  | 316 1   | 186 1  | 341 46 | 19 16  | 3 51   |
|       | 25   | 305 21 | 224 42  | 313 37R | 307 51  | 186 1R | 352 19 | 19 48  | 3 20   |
| Feb.  | 1    | 315 30 | 229 55  | 302 11  | 300 18  | 185 43 | 3 11   | 20 29  | 2 49   |
|       | 14   | 325 37 | 234 56  | 301 11D | 111 20  | 185 5  | 11 7   | 21 19  | 2 16   |
|       | 24   | 335 43 | 229 39  | 309 1   | 314 43  | 184 12 | 18 39  | 22 16  | 1 46   |
| March | 6    | 345 45 | 244 1   | 321 12  | 328 19  | 183 6  | 24 9   | 23 20  | 1 12   |
|       | 16   | 355 11 | 247 58  | 335 57  | 344 6   | 181 51 | 26 44  | 24 28  | 0 40   |
|       | 26   | 5 40   | 251 21  | 352 48  | 2 8     | 180 34 | 25 30R | 25 40  | 9      |
| April | 5    | 15 32  | 254 1   | 11 51   | 22 7    | 179 18 | 20 33  | 26 54  | 359 31 |
|       | 15   | 25 21  | 255 55  | 32 37   | 42 49   | 178 11 | 14 31  | 28 10  | 359 5  |
|       | 25   | 35 7   | 256 44  | 52 8    | 59 48   | 177 15 | 10 52  | 28     | 358 33 |
| May   | 5    | 44 49  | 256 22R | 65 11   | 69 48   | 176 35 | 11 6   | 30 42  | 358 00 |
|       | 11   | 54 29  | 254 43  | 71 47   | 71 43R  | 171 12 | 14 47  | 31 56  | 357 30 |
|       | 21   | 11 7   | 252 1   | 69 56   | 67 13   | 176 6D | 20 54  | 31     | 356 51 |
| June  | 1    | 74 39  | 248 21  | 66 21R  | 63 25D  | 176 22 | 29 30  | 34 20  | 356 21 |
|       | 15   | 84 13  | 245 9   | 64 19   | 67 1    | 176 54 | 38 29  | 35 22  | 355 51 |
|       | 24   | 93 46  | 242 49  | 71 34   | 77 42   | 177 42 | 48 13  | 36 17  | 355 19 |
| July  | 1    | 103 18 | 241 45  | 85 15   | 94 23   | 178 43 | 58 31  | 37 6   | 354 49 |
|       | 15   | 112 50 | 242 4D  | 103 58  | 115 6   | 180 00 | 69 11  | 37 47  | 354 16 |
|       | 25   | 122 23 | 243 41  | 125 39  | 125 39  | 181 27 | 80 15  | 38 20  | 353 43 |
| Aug.  | 1    | 131 56 | 246 26  | 145 12  | 153 59  | 183 1  | 91 26  | 38 42  | 353 11 |
|       | 14   | 141 32 | 250 08  | 162 1   | 169 11  | 184 50 | 102 11 | 38 54  | 352 41 |
|       | 24   | 151 9  | 254 37  | 176 29  | 182 36  | 186 43 | 114 34 | 38 56R | 351 9  |
| Sep.  | 1    | 160 49 | 259 43  | 187 50  | 191 54  | 188 42 | 126 23 | 38 11  | 351 37 |
|       | 13   | 170 32 | 265 20  | 194 23  | 194 21R | 190 45 | 138 10 | 38 29  | 351 1  |
|       | 23   | 180 17 | 271 22  | 194 4R  | 185 57  | 192 52 | 150 25 | 38 1   | 330 34 |
| Oct.  | 3    | 190 6  | 297 46  | 181 57  | 179 52R | 195 1  | 162 38 | 37 11  | 349 56 |
|       | 13   | 111 59 | 284 11  | 182 4D  | 188 57  | 197 11 | 174 56 | 36 41  | 349 29 |
|       | 23   | 209 55 | 291 18  | 194 56  | 204 41  | 199 21 | 187 19 | 35 11  | 349 00 |
| Nov.  | 2    | 219 11 | 298 22  | 211 19  | 219 33  | 201 29 | 199 45 | 35 7   | 348 27 |
|       | 12   | 229 56 | 305 34  | 227 40  | 235 39  | 203 35 | 212 15 | 34 20  | 347 47 |
|       | 22   | 240 1  | 313 7   | 243 32  | 251 21  | 205 36 | 224 47 | 33 36  | 347 11 |
| Dec.  | 2    | 250 1  | 320 15  | 259 6   | 266 49  | 207 30 | 237 20 | 32 1   | 346 50 |
|       | 12   | 260 18 | 327 41  | 274 30  | 282 1   | 209 18 | 249 55 | 32 31  | 346 19 |
|       | 22   | 270 28 | 335 8   | 289 7   | 295 11  | 210 56 | 262 30 | 32 12  | 345 11 |

Ayanamso: 21° 58' 43"

RAMAN'S EPHEMERIS  
Longitude of the Moon

| 1969    | Sun    | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  |        |        |        |        |        | 76 12  | 100 1  |
| 5       | 124 5  | 148 38 | 173 50 | 200 7  | 227 50 | 257 11 | 287 15 |
| 10      | 317 5  | 345 30 | 12 3   | 37 00  | 61 3   | 84 46  | 108 40 |
| Feb. 1  |        |        |        | 120 48 | 145 10 | 170 52 | 197 1  |
| 9       | 224 5  | 252 15 | 281 19 | 310 40 | 335 23 | 6 45   | 32 34  |
| 23      | 57 11  | 11 1   | 104 50 |        |        |        |        |
| March 1 |        |        |        | 129 7  | 154 14 | 180 17 | 207 13 |
| 9       | 234 53 | 261 6  | 291 15 | 320 00 | 347 50 | 11 41  | 40 20  |
| 23      | 44 55  | 11 51  | 112 42 | 137 3  | 162 24 |        |        |
| April 1 |        | 175 34 | 202 31 | 231 5  | 259 47 | 288 22 | 316 24 |
| 13      | 111 11 | 10 16  | 33 53  | 60 11  | 11 53  | 108 40 | 132 39 |
| 27      | 157 25 | 125 34 |        |        |        |        |        |
| May 1   |        |        | 211 20 | 240 26 | 270 1  | 299 41 | 327 3  |
| 11      | 353 14 | 19 44  | 11 40  | 69 15  | 93 13  | 116 57 | 140 51 |
| 25      | 165 32 | 191 37 | 219 31 | 249 11 |        |        |        |
| June 1  | 104 14 | 124 11 | 323 11 | 139 21 | 16 49  | 41 38  | 55 8   |
| 15      | 90 4   | 113 47 | 137 33 | 161 45 | 111 59 | 213 47 | 242 23 |
| 29      | 272 44 |        |        |        |        |        |        |
| July 1  |        | 303 14 | 332 41 | 0 22   | 26 21  | 51 8   | 75 14  |
| 13      | 98 55  | 122 44 | 146 39 | 171 11 | 196 19 | 223 00 | 251 23 |
| 27      | 281 16 | 311 37 | 341 16 |        |        |        |        |
| Aug. 1  |        |        |        |        |        |        | 355 22 |
| 8       | 22 23  | 11 11  | 72 11  | 95 57  | 119 42 | 143 41 | 168 11 |
| 17      | 193 20 | 219 30 | 246 55 | 275 37 | 305 13 | 334 50 | 3 39   |
| 31      | 30 26  |        |        |        |        |        |        |
| Sep. 1  |        |        |        |        | 43 33  | 111 23 | 92 30  |
| 7       | 116 14 | 111 13 | 134 47 | 190 11 | 111 23 | 243 39 | 271 40 |
| 21      | 300 18 | 329 10 | 357 41 | 25 14  | 51 28  |        |        |
| Oct. 1  |        |        |        |        |        | 76 22  | 100 30 |
| 5       | 124 16 | 148 20 | 173 11 | 189 11 | 217 23 | 264 11 | 111 40 |
| 19      | 311 00 | 339 3  | 1 11   | 111 11 | 69 26  | 84 11  | 108 21 |
| Nov. 1  |        |        |        | 150 13 | 184 11 | 168 28 | 111 10 |
| 9       | 221 11 | 248 57 | 279 00 | 307 47 | 335 11 | 1 2    | 29 31  |
| 23      | 55 35  | 80 13  | 104 27 | 129 13 |        |        |        |
| Dec. 1  |        |        |        |        | 151 54 | 176 11 | 201 57 |
| 7       | 229 17 | 258 36 | 288 31 | 318 11 | 346 21 | 13 21  | 39 17  |
| 21      | 54 14  | 88 55  | 118 54 | 136 34 | 160 15 | 184 22 |        |

Ayanamsa: 21° 58' 43"

## Longitudes of Planets

|       | 1970 | Sun    | Mars   | Mero.   | Merc.   | Jupit.  | Venus   | Saturn | Rahu   |
|-------|------|--------|--------|---------|---------|---------|---------|--------|--------|
| Jan.  | 5    | 284 44 | 345 36 | 295 50R | 296 22R | 212 55  | 280 7   | 32 3D  | 345 4  |
|       | 15   | 294 56 | 353 11 | 290 1   | 285 9   | 214 1   | 292 41  | 32 10  | 344 31 |
|       | 25   | 305 6  | 0 26   | 283 55D | 281 49  | 214 58  | 305 16  | 32 29  | 344 00 |
| Feb.  | 4    | 315 15 | 7 49   | 289 48  | 295 5   | 215 36  | 317 49  | 32 58  | 343 50 |
|       | 14   | 325 23 | 15 8   | 301 13  | 307 59  | 215 55  | 330 21  | 33 37  | 342 58 |
|       | 24   | 335 28 | 22 24  | 315 14  | 322 57  | 215 56R | 342 52  | 34 24  | 342 24 |
| March | 4    | 345 20 | 29 36  | 330 6   | 339 42  | 215 11  | 355 21  | 35 19  | 341 54 |
|       | 16   | 354 29 | 36 44  | 348 47  | 358 22  | 215 2   | 7 48    | 36 21  | 341 20 |
|       | 26   | 5 25   | 43 48  | 8 21    | 18 11   | 214 10  | 20 12   | 37 28  | 340 50 |
| April | 5    | 15 18  | 50 41  | 28 27   | 37 18   | 213 6   | 32 34   | 38 40  | 340 14 |
|       | 15   | 25 7   | 57 43  | 44 28   | 49 27   | 211 53  | 44 57   | 39 54  | 340 43 |
|       | 25   | 35 52  | 64 35  | 52 3    | 52 17R  | 210 10  | 57 7    | 41 10  | 339 11 |
| May   | 5    | 44 38  | 71 24  | 50 29R  | 47 35   | 209 22  | 69 18   | 42 35  | 338 41 |
|       | 15   | 54 15  | 78 9   | 44 60   | 43 19   | 208 14  | 78 9    | 43 44  | 338 10 |
|       | 25   | 63 53  | 84 50  | 43 55D  | 45 43   | 207 17  | 88 50   | 44 59  | 337 40 |
| June  | 4    | 73 21  | 91 28  | 49 31   | 54 47   | 206 36  | 105 28  | 46 13  | 337 1  |
|       | 14   | 83 2   | 98 3   | 61 23   | 69 15   | 206 11  | 117 21  | 47 22  | 336 11 |
|       | 24   | 92 35  | 104 36 | 78 11   | 88 23   | 206 4D  | 129 7   | 48 27  | 335 1  |
| July  | 4    | 102 7  | 111 6  | 97 6    | 109 55  | 206 15  | 140 47  | 49 27  | 335 30 |
|       | 14   | 111 39 | 117 34 | 120 19  | 130 4   | 206 14  | 152 16  | 50 50  | 335 11 |
|       | 24   | 121 11 | 124 00 | 139 4   | 147 19  | 207 28  | 163 35  | 51 6   | 334 28 |
| Aug.  | 3    | 130 45 | 130 25 | 154 50  | 161 33  | 208 28  | 174 39  | 51 43  | 333 56 |
|       | 13   | 140 20 | 138 49 | 167 11  | 172 47  | 209 49  | 185 50  | 52 11  | 333 24 |
|       | 23   | 149 57 | 143 11 | 178 18  | 177 50  | 211 5   | 195 49  | 52 29  | 332 59 |
| Sep.  | 3    | 159 27 | 149 33 | 177 29R | 174 31  | 212 43  | 205 42  | 52 37  | 332 20 |
|       | 12   | 169 10 | 155 24 | 189 59  | 165 22  | 214 11  | 214 51  | 52 34R | 331 49 |
|       | 22   | 179 4  | 162 15 | 163 48D | 163 48D | 216 22  | 222 59  | 52 20  | 331 18 |
| Oct.  | 2    | 188 28 | 168 36 | 171 55  | 179 28  | 218 22  | 229 11  | 51 57  | 330 43 |
|       | 12   | 198 45 | 174 57 | 188 5   | 196 47  | 220 26  | 233 57  | 51 23  | 330 13 |
|       | 22   | 208 25 | 181 11 | 205 21  | 213 43  | 222 34  | 241 1R  | 50 43  | 329 43 |
| Nov.  | 1    | 218 39 | 187 39 | 221 51  | 229 49  | 224 45  | 252 27  | 50 00  | 329 9  |
|       | 11   | 228 41 | 194 00 | 237 36  | 245 15  | 226 57  | 227 1   | 49 10  | 328 38 |
|       | 21   | 238 45 | 200 21 | 252 48  | 252 48  | 228 9   | 221 39  | 48 22  | 328 1  |
| Dec.  | 1    | 248 53 | 206 42 | 267 21  | 274 1   | 231 20  | 219 46D | 47 35  | 327 35 |
|       | 11   | 259 3  | 211 3  | 279 43  | 283 26  | 233 28  | 222 11  | 46 55  | 327 1  |
|       | 21   | 269 12 | 219 24 | 293 36R | 293 36R | 235 31  | 227 3   | 46 21  | 326 31 |
|       | 31   | 279 24 | 225 44 | 272 36  | 268 24  | 237 24  | 234 23  | 45 58  | 325 50 |

Ayanamas: 21° 59' 34"

1970 A.D.

## RAMAN'S EPHEMERIS

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## Longitude of the Moon

| 1970  | Sun. | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|-------|------|--------|--------|--------|--------|--------|--------|
| Jan.  | 1    |        | 197 4  | 222 27 | 251 45 | 281 43 | 312 9  |
|       | 11   | 341 45 | 36 15  | 61 18  | 85 53  | 109 47 | 133 28 |
|       | 25   | 157 10 | 181 12 | 204 2  | 222 13 |        |        |
| Feb.  | 1    | 245 56 | 274 44 | 304 53 | 335 13 | 4 33   | 32 12  |
|       | 15   | 82 49  | 100 44 | 120 54 | 150 8  | 178 15 | 202 11 |
| March | 1    | 255 33 | 283 50 | 313 17 | 343 11 | 12 11  | 40 22  |
|       | 15   | 91 21  | 115 15 | 135 53 | 162 46 | 187 17 | 212 37 |
|       | 29   | 286 00 | 294 00 |        |        |        |        |
| April | 1    |        |        |        |        | 308 19 | 337 17 |
|       | 5    | 6 17   | 34 35  | 61 35  | 87 6   | 111 25 | 135 9  |
|       | 19   | 183 22 | 208 49 | 235 22 | 262 48 | 289 47 | 316 1  |
| May   | 1    |        |        |        |        |        | 347 19 |
|       | 3    | 15 28  | 43 3   | 69 11  | 95 1   | 119 18 | 145 5  |
|       | 17   | 191 26 | 217 18 | 244 13 | 272 11 | 301 12 | 333 00 |
|       | 31   | 25 00  |        |        |        |        |        |
| June  | 1    |        |        |        | 38 11  | 65 19  | 90 54  |
|       | 7    | 115 59 | 139 11 | 162 41 | 186 55 | 212 12 | 239 6  |
|       | 21   | 191 55 | 215 14 | 241 48 | 266 21 | 291 57 |        |
| July  | 1    |        |        |        |        | 74 40  | 101 34 |
|       | 5    | 123 45 | 147 28 | 171 11 | 195 9  | 220 23 | 247 17 |
|       | 19   | 305 41 | 335 48 | 365 53 | 395 37 | 425 11 | 454 84 |
| Aug.  | 1    |        |        |        | 120 37 | 144 50 | 167 54 |
|       | 9    | 211 19 | 243 12 | 269 49 | 295 11 | 321 21 | 347 27 |
|       | 23   | 55 11  | 81 12  | 106 43 | 129 33 | 153 11 | 177 11 |
| Sep.  | 1    |        | 164 58 | 188 47 | 213 15 | 238 27 | 265 00 |
|       | 13   | 322 11 | 352 43 | 382 22 | 411 52 | 441 27 | 470 28 |
|       | 27   | 150 4  | 173 43 |        |        |        |        |
| Oct.  | 1    |        |        | 197 55 | 222 45 | 247 25 | 272 11 |
|       | 11   | 331 33 | 1 6    | 30 35  | 58 58  | 85 11  | 110 45 |
|       | 25   | 158 23 | 182 14 | 206 46 | 232 13 |        |        |
| Nov.  | 1    | 243 17 | 271 58 | 299 20 | 327 21 | 355 54 | 384 43 |
|       | 15   | 80 22  | 106 17 | 130 46 | 154 31 | 178 12 | 202 32 |
|       | 29   | 254 35 |        |        |        |        |        |
| Dec.  | 1    |        | 282 6  | 310 7  | 338 15 | 366 25 | 394 24 |
|       | 13   | 88 36  | 114 11 | 138 32 | 162 15 | 185 58 | 210 19 |
|       | 27   | 203 2  | 227 53 | 250 16 |        |        |        |

Ayanamsa: 21° 59' 34"

## Longitudes of Planets

|       | 1971 | Sun    | Mars    | Mer.    | Mer.    | Jupit.  | Venus  | Saturn | Rahu   |
|-------|------|--------|---------|---------|---------|---------|--------|--------|--------|
| Jan.  | 5    | 284 30 | 228 54  | 268 19R | 268 7D  | 238 28  | 238 48 | 45 50R | 325 43 |
|       | 15   | 294 42 | 235 14  | 271 01  | 273 44  | 240 12  | 247 54 | 45 42  | 326 5  |
|       | 25   | 304 51 | 241 32  | 281 07  | 282 3   | 241 49  | 258 08 | 45 45D | 326 39 |
| Feb.  | 4    | 315 02 | 247 49  | 295 05  | 301 27  | 243 13  | 268 47 | 46 00  | 327 07 |
|       | 14   | 325 09 | 254 03  | 310 11  | 318 17  | 244 25  | 279 52 | 46 26  | 328 36 |
|       | 24   | 335 14 | 260 16  | 324 47  | 333 43  | 245 31  | 291 14 | 47 01  | 329 58 |
| March | 6    | 345 16 | 266 23  | 345 00  | 354 41  | 246 01  | 302 47 | 47 35  | 322 28 |
|       | 16   | 355 15 | 272 28  | 3 32    | 14 04   | 246 23  | 314 31 | 48 38  | 322 04 |
|       | 26   | 5 11   | 278 27  | 22 01   | 28 27   | 246 27R | 326 20 | 49 38  | 321 29 |
| April | 5    | 15 04  | 284 19  | 32 03   | 33 46R  | 246 18  | 338 15 | 50 44  | 320 57 |
|       | 15   | 25 53  | 290 02  | 41 08   | 28 53   | 245 38  | 350 12 | 51 54  | 320 25 |
|       | 25   | 34 38  | 295 33  | 51 40   | 33 27   | 245 49  | 1 43   | 53 07  | 329 53 |
| May   | 5    | 44 22  | 300 51  | 71 18D  | 55 10   | 243 46  | 14 17  | 54 23  | 319 22 |
|       | 15   | 54 01  | 306 19  | 81 31   | 65 24   | 242 35  | 23 21  | 55 41  | 318 43 |
|       | 25   | 63 38  | 310 22  | 91 41   | 75 14   | 241 19  | 33 25  | 56 33  | 318 18 |
| June  | 4    | 73 14  | 314 25  | 101 01  | 85 12   | 240 04R | 43 00  | 58 15  | 317 42 |
|       | 14   | 82 48  | 317 45  | 111 24  | 95 13   | 238 56  | 54 24  | 59 30  | 317 15 |
|       | 24   | 92 20  | 320 26  | 121 35  | 105 43  | 237 57  | 65 22  | 60 43  | 316 36 |
| July  | 4    | 101 53 | 321 40  | 131 45  | 125 34  | 237 13  | 87 03  | 61 49  | 316 11 |
|       | 14   | 111 24 | 321 54R | 141 45  | 141 04  | 236 46  | 99 17  | 63 08  | 315 39 |
|       | 24   | 120 57 | 322 51  | 147 29  | 152 55  | 236 28  | 111 42 | 63 50  | 315 02 |
| Aug.  | 3    | 130 31 | 318 46R | 157 07  | 159 48  | 235 48  | 123 50 | 64 32  | 314 35 |
|       | 13   | 140 17 | 316 08  | 160 31R | 159 06  | 237 11  | 136 10 | 65 21  | 314 04 |
|       | 23   | 149 43 | 313 44  | 165 31  | 161 06  | 237 55  | 148 33 | 65 54  | 313 32 |
| Sep.  | 2    | 159 22 | 312 13  | 147 51  | 147 41D | 236 53  | 160 56 | 66 17  | 313 00 |
|       | 12   | 169 04 | 311 57D | 151 06  | 157 30  | 240 07  | 173 20 | 66 29  | 312 28 |
|       | 22   | 178 48 | 313 00  | 155 14  | 174 44  | 241 33  | 185 48 | 66 31R | 311 57 |
| Oct.  | 2    | 188 29 | 315 17  | 183 49  | 182 43  | 243 10  | 198 15 | 66 21  | 311 25 |
|       | 12   | 198 30 | 318 44  | 200 49  | 200 36  | 244 58  | 210 42 | 66 03  | 310 53 |
|       | 22   | 208 23 | 323 39  | 217 33  | 225 20  | 246 55  | 223 10 | 65 33  | 310 21 |
| Nov.  | 1    | 218 24 | 327 25  | 232 58  | 240 19  | 248 58  | 235 36 | 64 55  | 309 50 |
|       | 11   | 228 35 | 331 35  | 247 24  | 254 09  | 251 02  | 248 03 | 64 12  | 309 18 |
|       | 21   | 238 31 | 335 17  | 260 17  | 265 15  | 253 15  | 260 32 | 63 23  | 308 46 |
| Dec.  | 1    | 248 35 | 341 12  | 268 06  | 271 12R | 255 29  | 272 59 | 62 34  | 308 14 |
|       | 11   | 258 46 | 350 28  | 267 04  | 255 42  | 257 44  | 285 25 | 61 45  | 307 43 |
|       | 21   | 268 57 | 356 43  | 262 02  | 252 52D | 260 00  | 297 48 | 61 04  | 307 10 |
|       | 31   | 278 08 | 3 04    | 254 37  | -       | 262 15  | 310 10 | 60 27  | 306 39 |

Ayanamasa : 22° 0' 24"

1971 A.D.

## RAMAN'S EPHEMERIS

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Longitude of the Moon

| 1971    | Sun.   | Tue.   | Thurs. | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  |        |        |        |        |        |        | 334 43 |
| 3       | 353 15 | 31 12  | 58 20  | 84 38  | 110 6  | 134 37 | 158 29 |
| 17      | 155 1  | 205 50 | 230 36 | 256 54 | 284 55 | 314 39 | 344 17 |
| 31      | 13 11  |        |        |        | 37 54  | 66 21  | 91 11  |
| Feb. 1  | 118 42 | 121 8  | 134 00 | 178 35 | 202 17 | 226 30 | 250 5  |
| 7       | 233 11 | 207 21 | 237 27 | 7 11   |        |        |        |
| 21      |        |        |        |        | 37 25  | 65 44  | 91 19  |
| March 1 |        |        |        |        | 211 11 | 235 35 | 260 51 |
| 7       | 116 1  | 128 11 | 163 43 | 187 21 | 211 11 | 235 35 | 260 51 |
| 21      | 287 25 | 315 40 | 345 23 | 10 1   | 43 53  | 74 11  |        |
| April 1 |        |        | 87 32  | 114 25 | 137 8  | 160 44 | 184 18 |
| 11      | 210 12 | 232 39 | 258 47 | 283 48 | 310 56 | 339 27 | 8 13   |
| 15      | 39 19  | 68 30  | 96 55  |        |        |        |        |
| May 1   |        |        |        | 121 23 | 143 36 | 166 12 | 191 35 |
| 9       | 217 1  | 241 58 | 267 40 | 294 8  | 321 25 | 349 36 | 28 39  |
| 23      | 47 11  | 76 38  | 104 21 | 129 25 | 158 40 |        |        |
| June 1  |        | 134 53 | 190 1  | 213 11 | 238 4  | 263 59 | 290 49 |
| 13      | 318 19 | 346 21 | 14 44  | 43 17  | 71 29  | 98 47  | 124 47 |
| 27      | 149 51 | 173 26 |        |        |        |        |        |
| July 1  |        |        | 110 6  | 231 12 | 246 17 | 272 39 | 300 13 |
| 11      | 328 38 | 357 18 | 25 49  | 52 52  | 81 11  | 107 38 | 132 1  |
| 25      | 157 34 | 181 25 | 206 5  | 229 10 |        |        |        |
| Aug. 1  | 241 34 | 267 20 | 299 11 | 329 27 | 352 58 | 379 19 | 404 47 |
| 15      | 78 5   | 104 25 | 129 28 | 153 57 | 177 52 | 202 31 | 225 18 |
| 29      | 249 44 | 275 23 |        |        |        |        |        |
| Sep. 1  |        |        |        |        |        | 288 56 | 317 4  |
| 5       | 346 51 | 17 11  | 46 50  | 74 54  | 101 20 | 126 29 | 150 48 |
| 19      | 171 42 | 198 23 | 223 5  | 246 10 | 271 00 | 297 13 |        |
| Oct. 1  |        |        |        |        |        |        | 325 12 |
| 3       | 355 1  | 26 44  | 55 57  | 84 55  | 110 54 | 136 51 | 169 52 |
| 17      | 184 34 | 108 15 | 231 9  | 255 25 | 280 23 | 306 25 | 334 1  |
| 31      | 3 20   |        |        |        |        |        |        |
| Nov. 1  |        |        |        |        | 33 30  | 49 7   | 78 48  |
| 7       | 106 33 | 132 20 | 156 45 | 180 29 | 204 6  | 228 4  | 252 30 |
| 21      | 277 31 | 303 16 | 330 00 | 355 2  | 27 20  |        |        |
| Dec. 1  |        |        |        |        |        | 57 16  | 86 39  |
| 5       | 114 27 | 140 26 | 164 59 | 188 45 | 212 27 | 236 33 | 261 24 |
| 19      | 287 3  | 312 30 | 340 11 | 8 40   | 37 19  | 66 15  | 94 45  |

Ayanamasa: 22° 0' 24"



## Longitudes of Planets

|       | 1972 | Sun    | Mars   | Mer.    | Mer.    | Jupit.  | Venus  | Saturn | Rahu   |
|-------|------|--------|--------|---------|---------|---------|--------|--------|--------|
| Jan.  | 5    | 284 11 | 6 18   | 262 1   | 268 18  | 263 21  | 315 50 | 60 11R | 306 23 |
|       | 15   | 294 27 | 12 49  | 275 9   | 282 22  | 265 31  | 328 37 | 59 49  | 305 51 |
|       | 25   | 304 38 | 19 24  | 289 52  | 297 37  | 267 35  | 340 50 | 59 37  | 305 19 |
| Feb.  | 4    | 314 47 | 25 59  | 305 41  | 314 02  | 269 34  | 352 54 | 59 35D | 304 48 |
|       | 14   | 324 54 | 30 39  | 322 44  | 331 41  | 271 25  | 4 51   | 59 46  | 304 18 |
|       | 24   | 334 59 | 39 11  | 341 7   | 350 44  | 273 20  | 16 37  | 60 8   | 303 45 |
| March | 5    | 345 1  | 45 47  | 359 39  | 6 8     | 274 36  | 28 9   | 60 39  | 303 13 |
|       | 15   | 355 1  | 52 21  | 11 11   | 15 47   | 275 52  | 21 21  | 61 21  | 302 34 |
|       | 25   | 365 1  | 58 54  | 15 00R  | 11 42   | 276 54  | 50 13  | 62 10  | 302 8  |
| April | 4    | 375 1  | 65 22  | 7 37    | 4 36    | 277 40  | 60 31  | 63 7   | 301 37 |
|       | 14   | 385 1  | 71 54  | 3 43D   | 4 51    | 278 9   | 70 14  | 64 11  | 301 05 |
|       | 24   | 395 1  | 78 24  | 7 52    | 12 23   | 278 19  | 78 59  | 65 18  | 300 33 |
| May   | 4    | 405 1  | 84 51  | 18 3    | 24 52   | 278 11R | 86 23  | 66 32  | 300 2  |
|       | 14   | 415 1  | 91 18  | 32 24   | 40 53   | 277 11  | 91 54  | 67 47  | 299 30 |
|       | 24   | 425 1  | 97 40  | 50 15   | 60 27   | 277 00  | 93 37  | 69 4   | 298 58 |
| June  | 3    | 435 1  | 104 1  | 71 16   | 82 15   | 276 2   | 95 40R | 70 22  | 298 26 |
|       | 13   | 445 1  | 110 21 | 92 53   | 102 45  | 274 52  | 89 2   | 71 40  | 297 55 |
|       | 23   | 455 1  | 116 43 | 111 43  | 119 42  | 273 37  | 82 56  | 72 56  | 297 23 |
| July  | 3    | 465 1  | 123 3  | 128 44  | 132 40  | 272 21  | 78 51  | 74 10  | 296 51 |
|       | 13   | 475 1  | 129 23 | 137 24  | 140 43  | 271 10  | 78 33D | 75 21  | 296 19 |
|       | 23   | 485 1  | 135 43 | 142 18  | 141 51R | 270 6   | 81 44  | 76 27  | 295 48 |
| Aug.  | 2    | 495 1  | 142 3  | 139 1   | 135 38  | 269 13  | 87 29  | 77 28  | 295 16 |
|       | 12   | 505 1  | 148 23 | 132 4   | 130 26  | 268 45  | 95 1   | 78 20  | 294 44 |
|       | 22   | 515 1  | 154 44 | 131 44D | 136 7   | 267 30  | 103 47 | 79 1   | 294 12 |
| Sep.  | 1    | 525 1  | 161 6  | 143 8   | 151 50  | 266 34D | 113 44 | 79 44  | 293 40 |
|       | 11   | 535 1  | 167 29 | 161 17  | 170 47  | 265 57  | 123 41 | 80 11  | 293 1  |
|       | 21   | 545 1  | 173 55 | 180 00  | 188 49  | 265 19  | 134 27 | 80 29  | 292 37 |
| Oct.  | 1    | 555 1  | 179 44 | 197 16  | 205 22  | 270 36  | 145 37 | 80 36  | 292 5  |
|       | 11   | 565 1  | 186 49 | 213 9   | 220 35  | 271 47  | 157 1  | 80 31R | 291 34 |
|       | 21   | 575 1  | 193 19 | 227 46  | 234 37  | 273 14  | 168 48 | 80 16  | 291 1  |
|       | 31   | 585 1  | 199 51 | 240 51  | 246 21  | 274 52  | 180 43 | 79 51  | 290 30 |
| Nov.  | 10   | 595 1  | 206 25 | 250 37  | 262 30  | 276 40  | 192 49 | 79 17  | 289 58 |
|       | 20   | 605 1  | 213 2  | 260 43R | 274 17  | 278 39  | 203 1  | 78 15  | 289 26 |
|       | 30   | 615 1  | 219 41 | 238 40  | 236 10  | 280 41  | 217 21 | 77 49  | 288 55 |
| Dec.  | 10   | 625 1  | 226 22 | 237 58D | 242 31  | 282 55  | 228 44 | 76 58  | 288 23 |
|       | 20   | 635 1  | 233 1  | 248 41  | 254 15  | 284 10  | 242 10 | 76 10  | 287 51 |
|       | 30   | 645 1  | 239 31 | 263 53  | -       | 287 42  | 254 38 | 75 15  | 287 19 |

Ayanamsa: 22° 1' 14"

1972 A.D.

## RAMAN'S EPHEMERIS

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Longitude of the Moon

| 1972    | Sun.   | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  |        |        |        | 108 37 | 135 18 | 184 47 |        |
| 9       | 209 30 | 232 22 | 256 58 | 282 39 | 308 30 | 334 14 | 5 32   |
| 23      | 33 58  | 62 14  | 90 3   | 117 7  | 143 14 |        |        |
| Feb. 1  |        | 165 54 | 180 32 | 205 26 | 229 9  | 251 48 | 277 27 |
| 13      | 303 4  | 332 10 | 1 16   | 30 31  | 59 9   | 88 48  | 113 26 |
| 27      | 139 12 | 163 15 |        |        |        |        |        |
| March 1 |        |        |        |        |        | 176 31 | 200 37 |
| 5       | 224 21 | 248 9  | 272 34 | 298 20 | 325 51 | 354 8  | 25 19  |
| 19      | 55 8   | 83 36  | 110 30 | 136 8  | 160 57 | 185 12 | 210 8  |
| April 1 |        |        |        | 221 00 | 244 43 | 268 45 | 293 38 |
| 9       | 320 2  | 348 23 | 18 29  | 49 12  | 78 59  | 106 59 | 133 10 |
| 23      | 158 5  | 182 15 | 206 3  | 229 49 |        |        |        |
| May 1   |        |        |        |        | 263 39 | 277 50 | 302 46 |
| 7       | 328 30 | 357 3  | 27 51  | 57 31  | 87 30  | 115 46 | 142 15 |
| 21      | 167 41 | 191 14 | 214 57 | 239 42 | 260 45 | 287 16 |        |
| June 1  |        |        | 299 47 | 325 33 | 352 35 | 21 9   | 50 55  |
| 11      | 80 59  | 110 7  | 137 36 | 163 21 | 187 48 | 211 39 | 236 23 |
| 25      | 259 27 | 284 7  | 309 32 |        |        |        |        |
| July 1  |        |        |        | 335 51 | 3 10   | 31 28  | 60 32  |
| 9       | 89 45  | 118 18 | 145 35 | 171 23 | 195 57 | 219 43 | 244 4  |
| 23      | 267 47 | 292 52 | 319 00 | 346 8  | 14 4   |        |        |
| Aug. 1  |        | 28 13  | 56 41  | 85 9   | 113 12 | 140 29 | 166 21 |
| 13      | 191 44 | 215 53 | 239 35 | 263 31 | 288 16 | 314 19 | 341 46 |
| 27      | 10 17  | 39 11  | 67 47  |        |        |        |        |
| Sep. 1  |        |        |        |        |        |        | 81 50  |
| 3       | 109 25 | 136 15 | 162 19 | 187 22 | 211 56 | 236 45 | 259 24 |
| 17      | 223 26 | 309 00 | 336 37 | 4 55   | 34 39  | 64 10  | 92 39  |
| Oct. 1  | 119 51 | 146 3  | 171 28 | 196 12 | 220 20 | 244 1  | 267 40 |
| 15      | 291 42 | 316 59 | 344 4  | 13 8   | 43 31  | 73 47  | 102 46 |
| 29      | 130 4  | 155 57 |        |        |        |        |        |
| Nov. 1  |        |        |        |        |        | 169 31 | 193 4  |
| 5       | 217 9  | 240 53 | 264 29 | 288 17 | 312 48 | 338 42 | 6 32   |
| 19      | 36 15  | 66 58  | 97 12  | 125 53 | 152 39 | 177 55 |        |
| Dec. 1  |        |        |        |        |        |        | 192 12 |
| 3       | 226 2  | 250 40 | 273 25 | 297 27 | 322 12 | 348 4  | 15 30  |
| 17      | 44 27  | 74 51  | 105 6  | 132 4  | 161 15 | 186 43 | 210 59 |
| 31      | 224 39 |        |        |        |        |        |        |

Ayanamsa: 22° 1' 14"

## Longitudes of Planets

| 1973  | Sun       | Mars.  | Mero.   | Mero.   | Jupit.  | Venus  | Saturn | Rahr   |
|-------|-----------|--------|---------|---------|---------|--------|--------|--------|
| Jan.  | 5 285 2   | 243 59 | 271 20  | 278 58  | 288 59  | 282 E  | 74 59R | 287 00 |
|       | 15 295 13 | 250 49 | 286 49  | 304 50  | 291 12  | 275 18 | 74 24  | 286 11 |
|       | 25 305 24 | 257 43 | 301 6   | 311 38  | 293 11  | 287 19 | 73 57  | 285 57 |
| Feb.  | 4 315 33  | 264 37 | 320 27  | 319 27  | 292 50  | 299 39 | 73 42  | 285 11 |
|       | 14 325 41 | 271 34 | 338 28  | 346 11  | 293 5   | 312 10 | 73 38D | 284 11 |
|       | 24 335 45 | 278 34 | 354 47  | 357 19  | 300 18  | 324 40 | 73 45  | 284 21 |
| March | 5 345 47  | 288 36 | 358 21R | 366 4   | 308 18  | 337 9  | 74 3   | 283 49 |
|       | 16 355 46 | 293 39 | 361 2   | 346 40  | 304 15  | 342 37 | 74 31  | 283 18 |
|       | 26 5 42   | 299 41 | 341 00  | 345 46D | 301 1   | 2 2    | 75 9   | 232 52 |
| April | 5 15 34   | 306 51 | 348 32  | 352 50  | 307 38  | 14 27  | 75 57  | 282 20 |
|       | 15 25 22  | 313 57 | 358 18  | 4 43    | 309 5   | 26 51  | 76 51  | 281 43 |
|       | 25 35 8   | 321 3  | 12 00   | 20 3    | 310 12  | 39 13  | 77 52  | 281 11 |
| May   | 5 44 51   | 328 8  | 28 50   | 38 24   | 311 8   | 51 33  | 78 59  | 280 45 |
|       | 15 54 31  | 335 9  | 48 41   | 59 31   | 311 46  | 63 52  | 80 11  | 280 8  |
|       | 25 64 8   | 342 8  | 70 27   | 80 56   | 312 5   | 76 9   | 81 26  | 279 35 |
| June  | 4 73 43   | 349 2  | 90 34   | 99 10   | 312 5R  | 88 29  | 82 42  | 279 4  |
|       | 14 83 17  | 355 48 | 107 37  | 112 54  | 311 48  | 100 38 | 84 00  | 278 38 |
|       | 24 92 50  | 2 23   | 118 23  | 121 23  | 311 10  | 112 51 | 85 18  | 278 00 |
| July  | 4 102 22  | 11 41  | 123 12  | 123 3R  | 310 20  | 125 2  | 86 35  | 277 28 |
|       | 14 111 54 | 14 49  | 121 6   | 117 53  | 309 13  | 137 11 | 87 50  | 277 3  |
|       | 24 121 26 | 20 32  | 114 42  | 112 55  | 307 59  | 149 18 | 88 8   | 276 25 |
| Aug.  | 3 131 00  | 25 45  | 113 31D | 117 14  | 306 41  | 161 21 | 90 11  | 275 53 |
|       | 13 140 40 | 30 23  | 122 33  | 130 30  | 305 26  | 173 20 | 91 13  | 275 21 |
|       | 23 150 12 | 34 15  | 139 51  | 149 39  | 304 18  | 185 19 | 92 10  | 274 56 |
| Sep.  | 1 159 53  | 37 8   | 159 11  | 169 59  | 303 22  | 197 12 | 93 00  | 274 18 |
|       | 12 169 54 | 41 54  | 178 58  | 188 53  | 302 42  | 208 59 | 93 40  | 273 46 |
|       | 22 179 21 | 47 13R | 194 11  | 202 15  | 302 21  | 220 39 | 94 11  | 273 14 |
| Oct.  | 2 189 9   | 38 7   | 209 31  | 216 24  | 301 19D | 232 12 | 94 33  | 272 42 |
|       | 12 199 1  | 35 51  | 219 00  | 228 27  | 302 17  | 243 35 | 95 44  | 272 10 |
|       | 22 208 57 | 32 28  | 233 7   | 236 5   | 303 14  | 254 44 | 96 44R | 271 39 |
| Nov.  | 1 218 55  | 29 18  | 250 21R | 232 51  | 304 7   | 265 36 | 97 22  | 271 7  |
|       | 11 228 57 | 26 42  | 227 48  | 231 24  | 305 18  | 276 3  | 98 9   | 270 35 |
|       | 21 239 1  | 25 25  | 220 30D | 224 11  | 306 44  | 285 54 | 98 38  | 270 1  |
| Dec.  | 1 249 10  | 25 11D | 229 49  | 236 24  | 308 22  | 294 54 | 99 59  | 269 32 |
|       | 11 259 19 | 26 50  | 241 46  | 251 18  | 310 00  | 302 35 | 101 14 | 269 1  |
|       | 21 269 30 | 29 10  | 258 53  | 266 41  | 312 11  | 308 21 | 91 24  | 268 28 |
|       | 31 279 41 | 32 11  | 274 31  | -       | 314 19  | 311 16 | 90 34  | 267 56 |

Ayanamsa: 22° 2' 5"

1973 A.D.

# RAMAN'S EPHEMERIS Longitude of the Moon

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|       | 1973 | Sun    | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|-------|------|--------|--------|--------|--------|--------|--------|--------|
| Jan.  | 1    |        |        |        |        | 346 28 | 270 13 | 294 24 |
|       | 11   | 319 18 | 345 00 | 11 46  | 59 40  | 68 39  | 98 23  | 127 31 |
|       | 21   | 155 39 | 182 8  | 107 8  | 221 5  | 234 34 | 278 32 |        |
| Feb.  | 1    |        |        | 230 41 | 218 43 | 341 46 | 8 44   | 36 24  |
|       | 11   | 84 34  | 93 7   | 121 42 | 149 47 | 176 51 | 202 34 | 227 8  |
|       | 25   | 220 46 | 274 25 |        |        |        |        |        |
| March | 1    |        |        | 224 41 | 324 7  | 330 55 | 18 50  | 47 16  |
|       | 11   | 11 39  | 103 44 | 131 28 | 158 39 | 185 4  | 211 29 | 234 28 |
|       | 25   | 258 34 | 288 12 | 300 38 | 332 6  |        |        |        |
| April | 1    | 345 31 | 13 30  | 43 46  | 72 2   | 100 9  | 128 21 | 155 10 |
|       | 15   | 181 14 | 204 12 | 231 2  | 254 53 | 278 23 | 302 16 | 327 6  |
|       | 29   | 222 54 |        |        |        |        |        |        |
| May   | 1    |        | 22 5   | 51 39  | 81 41  | 110 55 | 138 47 | 165 21 |
|       | 12   | 190 22 | 215 35 | 239 42 | 262 24 | 286 57 | 310 50 | 335 15 |
|       | 27   | 1 54   | 30 9   | 59 59  |        |        |        | 58 13  |
| June  | 1    |        |        |        |        |        |        | 260 22 |
|       | 8    | 105 29 | 133 35 | 162 2  | 187 56 | 212 42 | 236 42 | 260 22 |
|       | 17   | 283 57 | 307 47 | 331 15 | 357 46 | 24 47  | 53 41  | 82 22  |
| July  | 1    | 113 52 | 143 19 | 171 5  | 197 7  | 221 44 | 245 34 | 269 8  |
|       | 15   | 292 50 | 317 1  | 341 54 | 7 42   | 34 39  | 62 54  | 92 17  |
|       | 29   | 123 12 | 151 24 |        |        |        | 185 44 | 192 65 |
| Aug.  | 1    |        |        |        |        |        | 208 40 | 2 42   |
|       | 6    | 212 6  | 242 15 | 265 19 | 289 30 | 313 43 | 337 40 | 361 40 |
|       | 19   | 31 22  | 59 5   | 87 28  | 116 27 | 145 22 | 173 53 | 194 50 |
| Sep.  | 1    |        |        |        | 213 42 | 238 24 | 267 9  | 285 45 |
|       | 9    | 309 49 | 344 51 | 1 3    | 23 14  | 55 28  | 84 5   | 112 21 |
|       | 23   | 140 10 | 168 29 | 195 47 | 221 39 |        |        |        |
| Oct.  | 1    |        |        |        |        | 246 10 | 270 1  | 293 23 |
|       | 7    | 317 44 | 343 8  | 9 48   | 37 49  | 66 25  | 95 5   | 123 19 |
|       | 21   | 151 1  | 178 8  | 204 22 | 229 31 | 254 13 | 277 24 |        |
| Nov.  | 1    |        |        | 289 41 | 313 24 | 338 1  | 4 9    | 31 59  |
|       | 11   | 61 9   | 90 47  | 119 53 | 143 00 | 175 1  | 201 2  | 226 11 |
|       | 25   | 220 44 | 274 21 | 297 52 |        |        |        |        |
| Dec.  | 1    |        |        |        | 221 22 | 245 6  | 12 3   | 39 46  |
|       | 5    | 60 43  | 99 32  | 129 30 | 158 7  | 185 10 | 210 45 | 235 21 |
|       | 20   | 224 22 | 282 57 | 306 32 | 330 22 | 354 54 |        |        |

Ayanamasa: 22° 2' 5"

## Longitudes of Planets

| 1974  | Sun       | Mars   | Mer.    | Mer.    | Jupit.  | Venus   | Saturn  | Rahu   |
|-------|-----------|--------|---------|---------|---------|---------|---------|--------|
| Jan.  | 0 224 47  | 34 34  | 282 27  | 290 36  | 316 24  | 311 17R | 90 10R  | 267 41 |
|       | 15 224 58 | 38 21  | 282 54  | 307 22  | 317 40  | 303 18  | 89 35   | 267 8  |
|       | 30 225 9  | 42 51  | 283 58  | 324 29  | 320 00  | 302 30  | 88 47   | 266 37 |
| Feb.  | 4 225 18  | 47 53  | 283 22  | 333 35  | 322 22  | 297 24  | 88 18   | 266 8  |
|       | 14 325 23 | 53 1   | 341 45D | 340 44R | 324 45  | 295 50D | 87 57   | 265 23 |
|       | 24 335 30 | 58 24  | 336 15  | 331 1   | 327 11  | 288 8   | 87 47   | 264 55 |
| March | 4 345 32  | 63 57  | 327 19  | 327 14D | 322 22  | 303 24  | 87 50D  | 264 30 |
|       | 16 355 1  | 69 36  | 329 8   | 332 50  | 331 52  | 310 42  | 88 1    | 263 28 |
|       | 26 355 23 | 75 23  | 337 51  | 343 52  | 334 1   | 319 20  | 88 27   | 263 22 |
| April | 5 15 20   | 81 14  | 350 11  | 358 12  | 336 19  | 328 55  | 89 00   | 262 55 |
|       | 15 25 9   | 87 1   | 6 21    | 15 13   | 338 22  | 329 6   | 89 44   | 262 23 |
|       | 25 34 54  | 92 1   | 24 44   | 34 53   | 340 18  | 349 46  | 90 35   | 261 51 |
| May   | 5 44 37   | 98 1   | 45 34   | 56 23   | 342 1   | 0 43    | 91 33   | 261 19 |
|       | 15 54 17  | 105 5  | 66 47   | 75 17   | 343 29  | 11 56   | 92 28   | 260 47 |
|       | 25 63 54  | 111 9  | 84 35   | 91 32   | 345 1   | 23 20   | 93 47   | 260 11 |
| June  | 4 73 30   | 117 15 | 97 3    | 100 54  | 346 9   | 34 51   | 95 00   | 259 44 |
|       | 14 83 11  | 123 21 | 103 13  | 103 37R | 347 2   | 46 30   | 96 15   | 259 12 |
|       | 24 92 36  | 129 30 | 108 8   | 99 27   | 347 36  | 58 14   | 97 33   | 258 40 |
| July  | 4 102 8   | 135 39 | 96 32   | 94 36   | 347 51  | 70 5    | 98 51   | 258 12 |
|       | 14 111 40 | 141 51 | 94 29D  | 94 14   | 347 47R | 81 59   | 100 9   | 257 37 |
|       | 24 121 13 | 148 4  | 101 18  | 107 52  | 347 24  | 94 00   | 101 25  | 257 1  |
| Aug.  | 4 130 47  | 154 19 | 116 15  | 125 56  | 346 42  | 106 1   | 102 34  | 256 33 |
|       | 13 140 22 | 160 38 | 126 9   | 146 17  | 345 45  | 118 11  | 103 49  | 256 1  |
|       | 23 149 59 | 166 59 | 156 2   | 165 13  | 344 36  | 130 24  | 104 54  | 255 36 |
| Sep.  | 2 159 38  | 173 23 | 171 52  | 182 00  | 343 19  | 147 41  | 105 54  | 254 58 |
|       | 12 169 20 | 179 44 | 189 39  | 196 50  | 342 00  | 155 1   | 106 47  | 254 26 |
|       | 22 179 7  | 186 18 | 203 27  | 209 27  | 340 45  | 167 22  | 107 32  | 253 54 |
| Oct.  | 2 188 55  | 192 51 | 214 35  | 216 31  | 339 39  | 179 53  | 108 3   | 253 24 |
|       | 12 198 47 | 199 27 | 225 34  | 219 47R | 338 48  | 192 22  | 108 34  | 252 51 |
|       | 22 208 43 | 206 7  | 235 34  | 226 21  | 338 13  | 205 53  | 108 50  | 252 19 |
| Nov.  | 1 218 40  | 213 19 | 245 11  | 245 36D | 338 00  | 217 25  | 108 54  | 251 47 |
|       | 11 228 44 | 219 38 | 259 46  | 246 8   | 338 6D  | 229 58  | 109 49R | 251 22 |
|       | 21 238 47 | 226 30 | 273 23  | 251 1   | 338 32  | 242 31  | 108 30  | 250 44 |
| Dec.  | 1 248 55  | 233 25 | 288 49  | 246 37  | 339 18  | 255 5   | 108 2   | 250 12 |
|       | 11 259 4  | 240 24 | 294 26  | 262 17  | 340 21  | 267 22  | 107 26  | 249 40 |
|       | 21 269 15 | 247 29 | 300 11  | 278 8   | 341 41  | 280 12  | 106 42  | 249 8  |
|       | 31 279 26 | 254 37 | 306 14  | -       | 343 14  | 292 46  | 105 54  | 248 37 |

Ayanamso: 22° 2' 55"

1974 A.D.

## RAMAN'S EPHEMERIS

169

Longitude of the Moon

|       | 1974 | Sun.   | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|-------|------|--------|--------|--------|--------|--------|--------|--------|
| Jan.  | 1    |        | 7 23   | 24 00  | 21 12  | 22 8   | 122 14 | 152 45 |
|       | 13   | 181 7  | 207 23 | 232 24 | 256 22 | 279 50 | 303 25 | 327 26 |
|       | 17   | 351 22 | 17     | 43 22  |        |        |        | 57 6   |
| Feb.  | 1    |        |        |        |        |        |        | 252 40 |
|       | 8    | 85 22  | 115 23 | 145 44 | 175 17 | 197 32 | 223 40 |        |
|       | 17   | 276 22 | 300 24 | 324 15 | 348 50 | 14 9   | 40 22  |        |
| March | 1    |        |        |        |        |        |        | 67 13  |
|       | 8    | 95 15  | 124 19 | 153 58 | 183 10 | 210 55 | 236 52 | 261 19 |
|       | 17   | 284 58 | 308 34 | 332 42 | 357 45 | 14 5   | 50 23  | 77 59  |
|       | 31   | 105 57 |        |        |        |        |        |        |
| April | 1    |        |        |        |        | 120 9  | 148 49 | 177 28 |
|       | 7    | 205 23 | 231 53 | 257 00 | 281 2  | 131 12 | 328 32 | 353 19 |
|       | 21   | 19 19  | 46 29  | 74 32  | 102 49 |        |        |        |
| May   | 1    |        |        |        |        |        | 159 23 | 187 11 |
|       | 5    | 214 7  | 240 3  | 264 54 | 288 53 | 312 32 | 336 28 | 1 18   |
|       | 19   | 27 31  | 55 13  | 84 1   | 112 29 | 142 7  | 170 14 | 197 21 |
| June  | 1    |        |        |        | 210 33 | 236 14 | 261 3  | 286 10 |
|       | 9    | 308 52 | 332 35 | 356 52 | 22 17  | 49 16  | 77 57  | 107 47 |
|       | 23   | 137 43 | 166 45 | 194 21 | 220 31 |        |        |        |
| July  | 1    |        |        |        |        | 245 35 | 269 53 | 293 46 |
|       | 7    | 317 26 | 341 12 | 5 29   | 30 46  | 57 35  | 86 12  | 116 17 |
|       | 21   | 146 49 | 176 24 | 204 12 | 230 13 | 254 55 | 278 54 |        |
| Aug.  | 1    |        |        | 290 45 | 314 26 | 338 14 | 2 22   | 27 9   |
|       | 11   | 53 2   | 80 26  | 109 33 | 139 59 | 170 23 | 199 57 | 226 30 |
|       | 25   | 251 47 | 275 55 | 299 35 | 323 16 |        |        |        |
| Sep.  | 1    | 335 13 | 358 58 | 24 15  | 49 45  | 76 13  | 104 12 | 133 32 |
|       | 15   | 103 39 | 193 23 | 221 32 | 247 46 | 272 27 | 296 16 | 320 54 |
|       | 29   | 343 53 |        |        |        |        |        |        |
| Oct.  | 1    |        | 8 31   | 33 51  | 59 55  | 86 47  | 114 34 | 143 17 |
|       | 13   | 172 35 | 201 37 | 229 26 | 256 39 | 280 26 | 304 20 | 328 1  |
|       | 27   | 352 7  | 17 4   | 43 1   |        |        |        |        |
| Nov.  | 1    |        |        |        |        |        |        | 55 21  |
|       | 3    | 83 6   | 111 22 | 139 45 | 168 12 | 196 29 | 224 7  | 250 39 |
|       | 17   | 276 8  | 300 15 | 323 59 | 347 48 | 12 18  | 2 1    | 65 4   |
| Dec.  | 1    | 93 16  | 122    | 150 50 | 179 5  | 206 35 | 233 14 | 259 2  |
|       | 15   | 283 58 | 308 9  | 331 54 | 355 39 | 20 3   | 45 42  | 73 00  |
|       | 29   | 101 65 | 131 43 |        |        |        |        |        |

Ayanamsa: 22° 2' 55"

## Longitudes of Planets

| 1975  | Sun       | Mars   | Mero.   | Merc.   | Jupit. | Venus   | Saturn  | Rahu   |
|-------|-----------|--------|---------|---------|--------|---------|---------|--------|
| Jan.  | 5 284 21  | 258 12 | 274 25  | 302 5   | 344 11 | 299 2   | 105 30R | 248 21 |
|       | 15 284 43 | 265 24 | 310 35  | 317 52  | 345 57 | 311 24  | 104 40  | 247 49 |
|       | 25 284 54 | 272 43 | 323 11  | 325 30  | 347 57 | 324 3   | 103 53  | 247 17 |
| Feb.  | 4 111 3   | 280 4  | 323 10R | 317 36  | 350 7  | 336 53  | 103 13  | 246 45 |
|       | 14 111 11 | 287 30 | 317 11  | 310 00  | 352 21 | 348 59  | 102 38  | 246 14 |
|       | 24 111 15 | 294 58 | 310 44D | 313 33  | 354 40 | 1 22    | 102 14  | 245 42 |
| March | 6 345 17  | 302 28 | 318 1   | 323 36  | 357 3  | 13 59   | 102 1   | 245 10 |
|       | 16 355 17 | 310 1  | 330 00  | 337 4   | 359 29 | 24 52   | 101 57D | 244 38 |
|       | 26 5 13   | 317 36 | 341 24  | 352 53  | 1 53   | 38 00   | 102 11  | 244 10 |
| April | 5 15 5    | 325 12 | 1 45    | 11 11   | 4 19   | 49 59   | 102 24  | 243 35 |
|       | 15 24 55  | 332 49 | 21 10   | 31 39   | 6 41   | 61 50   | 102 53  | 243 3  |
|       | 25 34 41  | 340 25 | 42 17   | 52 31   | 8 1    | 73 53   | 103 33  | 242 31 |
| May   | 5 44 22   | 348 2  | 61 50   | 69 38   | 11 16  | 85 5    | 104 20  | 242 6  |
|       | 15 54 4   | 355 36 | 75 52   | 80 21   | 13 27  | 96 22   | 105 14  | 241 28 |
|       | 25 63 40  | 3 8    | 87 57   | 91 35R  | 15 29  | 107 22  | 106 15  | 240 56 |
| June  | 4 73 16   | 10 34  | 92 25   | 79 58   | 17 24  | 117 58  | 107 23  | 240 24 |
|       | 14 82 50  | 17 57  | 77 13   | 75 21   | 19 8   | 128 11  | 108 33  | 239 59 |
|       | 24 92 11  | 25 14  | 75 7D   | 76 50   | 20 43  | 138 7   | 109 48  | 239 20 |
| July  | 4 101 54  | 32 23  | 80 31   | 86 5    | 22 3   | 146 12  | 111 4   | 238 49 |
|       | 14 111 27 | 39 22  | 93 16   | 102 1   | 23 9   | 153 29  | 112 22  | 238 17 |
|       | 24 120 59 | 46 12  | 111 57  | 122 28  | 23 58  | 158 53  | 113 30  | 237 45 |
| Aug.  | 1 130 33  | 52 48  | 132 55  | 142 53  | 24 29  | 161 35  | 114 56  | 237 13 |
|       | 13 140 8  | 59 9   | 150 12  | 161 11  | 24 42  | 160 41R | 116 11  | 236 42 |
|       | 23 149 45 | 65 14  | 169 14  | 177 50  | 24 35R | 161 42  | 117 23  | 236 10 |
| Sep.  | 2 159 24  | 70 57  | 181 49  | 190 11  | 24 8   | 162 39  | 118 31  | 235 38 |
|       | 12 168 7  | 76 16  | 195 45  | 200 18  | 23 22  | 146 2   | 119 34  | 235 6  |
|       | 22 178 51 | 81 4   | 203 26  | 204 23R | 22 21  | 145 48D | 120 29  | 234 35 |
| Oct.  | 1 188 41  | 85 15  | 202 38  | 197 52  | 21 8   | 149 11  | 121 17  | 234 3  |
|       | 12 198 33 | 88 41  | 191 9   | 191 6   | 19 48  | 155 5   | 121 58  | 233 31 |
|       | 22 208 11 | 91 10  | 190 29D | 195 27  | 18 28  | 162 55  | 122 28  | 232 59 |
| Nov.  | 1 218 26  | 92 30  | 202 24  | 210 11  | 17 12  | 172 00  | 122 49  | 232 23 |
|       | 11 228 28 | 92 11  | 218 10  | 226 19  | 16 10  | 181 57  | 122 58  | 231 55 |
|       | 21 238 11 | 91 11  | 234 20  | 242 16  | 15 22  | 192 36  | 122 56R | 231 24 |
| Dec.  | 1 248 41  | 88 15  | 242 7   | 257 58  | 14 53  | 203 43  | 122 43  | 230 52 |
|       | 11 258 50 | 88 11  | 265 48  | 273 39  | 14 45D | 216 10  | 122 19  | 230 21 |
|       | 21 269 11 | 80 36  | 281 32  | 289 32  | 14 57  | 226 52  | 121 46  | 229 49 |
|       | 31 279 11 | 77 19  | 296 45  | -       | 15 32  | 238 47  | 121 6   | 229 17 |

Ayanamsa: 22° 3' 45"



## Longitude of the Moon

| 1975    | Sun.   | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  |        |        |        |        |        | 146 11 | 178 00 |
| 5       | 203 34 | 230 5  | 255 34 | 277 19 | 304 31 | 328 21 | 352 2  |
| 19      | 15 56  | 40 42  | 66 54  | 95 3   | 124 56 | 155 36 | 185 28 |
| Feb. 1  |        |        |        | 199 48 | 227 3  | 252 43 | 277 20 |
| 9       | 301 23 | 325 10 | 348 54 | 12 44  | 36 33  | 62 15  | 89 4   |
| 23      | 117 50 | 148 15 | 179 1  |        |        |        |        |
| March 1 |        |        |        | 208 40 | 236 16 | 262 1  | 286 30 |
| 9       | 310 22 | 334 11 | 357 51 | 21 55  | 46 27  | 71 49  | 98 27  |
| 23      | 126 16 | 156 36 | 187 3  | 216 42 | 244 34 |        |        |
| April 1 |        | 257 49 | 283 1  | 307 10 | 330 51 | 354 37 | 18 46  |
| 13      | 43 28  | 68 54  | 95 13  | 122 40 | 151 18 | 180 46 | 210 16 |
| 27      | 238 47 | 265 44 |        |        |        |        |        |
| May 1   |        |        | 291 7  | 315 22 | 339 7  | 2 56   | 27 19  |
| 11      | 52 32  | 78 41  | 105 44 | 133 54 | 161 59 | 190 43 | 219 13 |
| 25      | 247 2  | 273 38 | 299 1  | 323 20 |        |        |        |
| June 1  | 335 14 | 358 59 | 23 11  | 47 36  | 74 21  | 102 50 | 130 11 |
| 15      | 158 51 | 187 18 | 215 15 | 242 34 | 269 2  | 294 36 | 319 14 |
| 29      | 343 12 |        |        |        |        |        |        |
| July 1  |        | 6 54   | 31 00  | 56 5   | 81 43  | 110 55 | 140 12 |
| 13      | 169 35 | 196 44 | 225 50 | 252 25 | 278 12 | 303 12 | 327 4  |
| 27      | 351 25 | 15 11  | 39 5   |        |        |        |        |
| Aug. 1  |        |        |        |        |        |        | 51 27  |
| 3       | 77 14  | 104 22 | 134 17 | 164 32 | 194 16 | 222 38 | 249 29 |
| 17      | 275 13 | 299 59 | 324 16 | 348 8  | 11 48  | 35 34  | 59 58  |
| 31      | 85 37  |        |        |        |        |        |        |
| Sep. 1  |        |        |        |        | 99 7   | 127 11 | 157 51 |
| 7       | 188 31 | 218 9  | 245 58 | 272 10 | 297 6  | 321 18 | 345 8  |
| 21      | 8 50   | 32 36  | 57 45  | 81 45  | 108 6  |        |        |
| Oct. 1  |        |        |        |        |        | 136 18 | 156 10 |
| 5       | 196 45 | 226 38 | 254 52 | 281 14 | 306 10 | 330 13 | 353 55 |
| 19      | 17 13  | 41 40  | 66 13  | 91 32  | 117 59 | 144 11 | 174 50 |
| Nov. 1  |        |        |        | 189 56 | 219 56 | 248 56 | 276 26 |
| 9       | 302 14 | 326 44 | 350 50 | 14 11  | 38 13  | 63 56  | 91 30  |
| 23      | 114 28 | 142 20 | 170 30 | 190 19 |        |        |        |
| Dec. 1  |        |        |        |        | 228 20 | 256 51 | 284 12 |
| 7       | 310 7  | 334 11 | 358 30 | 22 11  | 46 19  | 71 28  | 97 47  |
| 21      | 125 11 | 153 12 | 181 29 | 209 45 | 237 47 | 265 23 |        |

Ayanamsha: 22° 3' 45"

## Longitudes of Planets

|       | 1976 | Sun    | Mars   | Merc.   | Merc.   | Jupit. | Venus  | Saturn  | Rahu   |
|-------|------|--------|--------|---------|---------|--------|--------|---------|--------|
| Jan.  | 5    | 284 18 | 76 18R | 303 33  | 308 6   | 15 54  | 244 49 | 120 44R | 229 1  |
|       | 15   | 294 29 | 74 54  | 309 3R  | 305 42  | 15 55  | 256 54 | 119 55  | 228 11 |
|       | 25   | 304 39 | 74 51D | 299 27  | 304 42  | 18 12  | 269 5  | 119 7   | 227 58 |
| Feb.  | 4    | 314 49 | 76 00  | 293 22D | 295 1   | 19 42  | 281 19 | 118 17  | 227 26 |
|       | 14   | 324 51 | 78 9   | 298 47  | 304 23  | 21 26  | 293 36 | 117 35  | 226 54 |
|       | 24   | 335 00 | 81 4   | 305 54  | 316 35  | 23 20  | 304 41 | 116 57  | 226 22 |
| March | 5    | 345 11 | 84 37  | 323 51  | 331 34  | 25 23  | 318 14 | 116 29  | 225 51 |
|       | 15   | 355 2  | 88 41  | 339 49  | 348 33  | 27 32  | 330 34 | 116 10  | 225 18 |
|       | 25   | 4 58   | 93 7   | 357 11  | 7 34    | 29 47  | 342 54 | 116 2   | 224 47 |
| April | 4    | 14 51  | 97 53  | 17 47   | 10 10   | 32 6   | 355 14 | 116 4D  | 224 15 |
|       | 14   | 24 39  | 102 51 | 38 10   | 47 4    | 34 28  | 7 34   | 116 19  | 223 44 |
|       | 24   | 34 25  | 108 3  | 264 20  | 11 40   | 35 51  | 19 52  | 116 44  | 223 11 |
| May   | 4    | 44 8   | 113 24 | 62 50   | 63 46   | 39 15  | 32 10  | 117 17  | 222 40 |
|       | 14   | 53 48  | 118 55 | 62 41R  | 60 10   | 41 39  | 44 27  | 118 1   | 222 8  |
|       | 24   | 63 26  | 124 31 | 57 22   | 55 22   | 43 58  | 50 44  | 118 52  | 221 36 |
| June  | 4    | 73 2   | 130 15 | 55 00D  | 56 11   | 46 16  | 69 1   | 119 49  | 221 4  |
|       | 13   | 82 36  | 136 3  | 58 13   | 58 36   | 48 28  | 81 18  | 120 54  | 220 34 |
|       | 23   | 92 8   | 141 56 | 70 59   | 78 47   | 50 36  | 93 35  | 122 2   | 220 1  |
| July  | 4    | 101 41 | 147 54 | 87 51   | 97 59   | 52 35  | 105 53 | 123 15  | 219 34 |
|       | 13   | 111 12 | 153 58 | 109 10  | 119 21  | 54 27  | 118 11 | 124 29  | 218 57 |
|       | 23   | 120 44 | 160 5  | 129 33  | 139 7   | 56 8   | 130 29 | 125 46  | 218 26 |
| Aug.  | 4    | 130 19 | 166 17 | 148 00  | 156 10  | 57 37  | 142 47 | 127 4   | 217 54 |
|       | 12   | 139 53 | 172 32 | 163 40  | 170 27  | 58 54  | 155 8  | 128 21  | 217 22 |
|       | 22   | 149 30 | 178 53 | 177 29  | 181 34  | 59 55  | 167 24 | 129 34  | 216 50 |
| Sep.  | 1    | 159 10 | 185 19 | 185 25  | 187 37  | 60 40  | 179 42 | 130 49  | 216 19 |
|       | 11   | 168 53 | 191 49 | 187 33R | 184 47  | 61 11  | 192 00 | 131 59  | 215 47 |
|       | 21   | 178 38 | 198 31 | 179 13  | 174 55  | 61 12R | 204 16 | 133 11  | 215 11 |
| Oct.  | 1    | 187 28 | 205 3  | 173 5   | 175 27D | 60 58  | 216 29 | 134 11  | 214 43 |
|       | 11   | 198 18 | 211 47 | 181 9   | 188 41  | 60 24  | 228 45 | 134 54  | 214 12 |
|       | 21   | 208 13 | 218 37 | 197 00  | 205 27  | 59 34  | 240 37 | 135 37  | 213 39 |
|       | 31   | 218 12 | 225 33 | 213 50  | 222 2   | 58 27  | 253 7  | 136 12  | 213 8  |
| Nov.  | 10   | 228 13 | 232 33 | 230 5   | 237 58  | 57 11  | 265 15 | 136 35  | 212 36 |
|       | 20   | 238 19 | 239 38 | 245 47  | 253 29  | 55 50  | 277 17 | 136 49  | 212 5  |
|       | 30   | 248 26 | 246 50 | 261 8   | 261 11  | 54 30  | 289 17 | 136 52R | 211 45 |
| Dec.  | 10   | 258 35 | 254 5  | 276 2   | 282 57  | 53 17  | 301 9  | 136 43  | 211 1  |
|       | 20   | 268 45 | 261 21 | 282 52  | 292 44  | 52 18  | 312 10 | 136 23  | 210 37 |
|       | 30   | 278 56 | 268 52 | 292 52R | -       | 51 36  | 324 19 | 135 52  | 199 57 |

Ayanamsa: 22° 4' 36"

## Longitude of the Moon

| 1976    | Sun.   | Tue.   | Thurs. | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  |        |        | 278 55 | 305 13 | 332 19 | 355 38 | 18 1   |
| 11      | 41 52  | 63 32  | 82 38  | 120 19 | 148 3  | 178 7  | 208 40 |
| 25      | 234 27 | 261 31 | 287 54 | 313 54 |        |        |        |
| Feb. 1  | 376 3  | 399 27 | 14 12  | 37 45  | 61 49  | 87 2   | 114 13 |
| 15      | 143 1  | 173 00 | 202 40 | 231 17 | 258 5  | 284 47 | 310 8  |
| 29      | 334 47 |        |        |        |        |        |        |
| March 1 |        |        |        |        | 348 54 | 10 44  | 34 17  |
| 7       | 57 58  | 82 28  | 104 28 | 133 25 | 160 9  | 188 18 | 215 34 |
| 21      | 255 00 | 281 47 | 308 63 | 331 47 | 355 46 | 19 25  |        |
| April 1 |        |        | 31 12  | 54 11  | 79 00  | 104 9  | 130 50 |
| 11      | 159 14 | 189 28 | 219 30 | 247 42 | 277 43 | 303 58 | 328 50 |
| 25      | 352 51 | 16 26  | 40 1   |        |        |        |        |
| May 1   |        |        |        | 63 55  | 88 25  | 113 48 | 140 27 |
| 9       | 168 35 | 197 56 | 228 1  | 257 49 | 286 7  | 312 37 | 337 34 |
| 23      | 1 29   | 25 1   | 54 43  | 73 00  | 98 1   |        |        |
| June 1  |        | 110 11 | 137 11 | 164 40 | 193 2  | 221 10 | 251 32 |
| 13      | 280 17 | 307 41 | 332 26 | 357 50 | 21 22  | 45 1   | 69 17  |
| 27      | 94 27  | 120 39 |        |        |        |        |        |
| July 1  |        |        | 147 46 | 175 31 | 203 11 | 232 12 | 260 42 |
| 11      | 288 45 | 315 44 | 341 22 | 5 47   | 33 30  | 53 6   | 77 27  |
| 25      | 103 1  | 129 57 | 157 55 | 186 21 |        |        |        |
| Aug. 1  | 200 36 | 228 11 | 256 51 | 284 22 | 311 10 | 338 58 | 1 42   |
| 15      | 25 34  | 49 7   | 73 3   | 98 4   | 124 41 | 152 51 | 181 50 |
| 29      | 211 12 | 239 48 |        |        |        |        |        |
| Sep. 1  |        |        |        |        |        | 263 47 | 281 1  |
| 5       | 307 31 | 333 9  | 357 54 | 21 55  | 45 29  | 69 6   | 93 27  |
| 19      | 119 10 | 146 42 | 175 52 | 205 55 | 235 38 | 264 14 |        |
| Oct. 1  |        |        |        |        |        |        | 291 25 |
| 11      | 317 24 | 342 23 | 6 11   | 30 26  | 54 59  | 77 9   | 102 1  |
| 17      | 127 34 | 154 51 | 183 55 | 214 13 | 244 33 | 273 46 | 301 13 |
| 31      | 327 3  |        |        |        |        |        |        |
| Nov. 1  |        |        |        |        | 339 28 | 3 41   | 27 22  |
| 7       | 50 57  | 74 40  | 98 51  | 123 49 | 149 11 | 177 41 | 207 3  |
| 21      | 237 25 | 267 36 | 297 25 | 323 11 | 348 11 |        |        |
| Dec. 1  |        |        |        |        |        | 12 30  | 36 3   |
| 5       | 59 40  | 83 41  | 107 11 | 133 40 | 159 11 | 187 18 | 215 56 |
| 19      | 245 37 | 275 28 | 304 22 | 331 20 | 357 41 | 20 11  | 44 23  |

Ayanamsa: 22° 4' 36"

## Longitudes of Planets

| 1977  | Sun       | Mars   | Mer.    | Mer.    | Jupit. | Venus  | Saturn  | Rahu   |
|-------|-----------|--------|---------|---------|--------|--------|---------|--------|
| Jan.  | 1 235 3   | 273 21 | 238 18R | 281 49  | 51 21R | 331 5  | 135 33R | 209 38 |
|       | 15 295 15 | 280 53 | 277 43  | 277 43D | 51 10  | 342 1  | 134 52  | 209 6  |
|       | 23 305 25 | 288 30 | 280 50  | 285 11  | 51 21D | 352 15 | 134 1   | 208 32 |
| Feb.  | 1 315 35  | 298 9  | 291 26  | 297 56  | 51 51  | 2 7    | 133 15  | 208 3  |
|       | 14 325 42 | 303 53 | 294 13  | 312 26  | 52 44  | 10 46  | 132 27  | 207 31 |
|       | 24 335 45 | 311 38 | 320 18  | 328 33  | 53 47  | 17 55  | 131 43  | 206 59 |
| March | 6 345 48  | 319 24 | 337 16  | 347 26  | 55 7   | 22 50  | 131 1   | 206 27 |
|       | 14 355 47 | 327 12 | 356 3   | 6 2     | 56 42  | 24 33  | 130 32  | 205 40 |
|       | 24 5 43   | 334 58 | 16 1    | 25 32   | 58 28  | 22 22R | 130 10  | 205 25 |
| April | 5 15 35   | 341 46 | 33 42   | 39 50   | 60 22  | 17 28  | 129 59  | 204 58 |
|       | 15 25 23  | 350 34 | 43 30   | 44 29R  | 62 25  | 11 33  | 129 58D | 204 20 |
|       | 25 35 9   | 358 21 | 45 18   | 40 1    | 64 33  | 8 18   | 130 1   | 203 49 |
| May   | 5 44 52   | 6 2    | 37 13   | 35 7    | 66 46  | 9 27D  | 130 28  | 203 17 |
|       | 15 54 32  | 13 42  | 34 48D  | 36 11   | 69 2   | 13 48  | 130 59  | 202 45 |
|       | 25 64 10  | 21 17  | 39 23   | 44 24   | 71 21  | 20 23  | 131 39  | 202 13 |
| June  | 4 73 45   | 29 48  | 50 30   | 57 46   | 73 40  | 28 28  | 132 27  | 201 42 |
|       | 14 83 19  | 36 12  | 66 12   | 75 43   | 76 00  | 37 35  | 133 22  | 201 10 |
|       | 24 92 52  | 43 32  | 85 37   | 97 00   | 78 18  | 47 25  | 134 24  | 200 35 |
| July  | 4 102 24  | 50 44  | 107 48  | 118 3   | 80 33  | 57 45  | 135 30  | 200 6  |
|       | 14 111 56 | 57 48  | 127 35  | 136 20  | 82 45  | 68 29  | 136 40  | 199 35 |
|       | 24 121 29 | 64 46  | 144 19  | 151 29  | 84 53  | 79 31  | 137 54  | 199 3  |
| Aug.  | 3 131 2   | 71 33  | 157 50  | 163 12  | 86 53  | 90 47  | 139 1   | 198 31 |
|       | 13 140 37 | 78 12  | 167 23  | 170 4   | 88 51  | 103 27 | 140 26  | 197 59 |
|       | 23 150 15 | 84 39  | 170 43R | 169 7   | 90 30  | 113 58 | 141 42  | 197 28 |
| Sep.  | 2 159 14  | 90 56  | 165 10  | 160 26  | 92 1   | 125 47 | 142 58  | 196 57 |
|       | 12 169 36 | 96 58  | 157 15  | 157 31D | 93 24  | 137 45 | 144 11  | 196 24 |
|       | 22 179 11 | 102 11 | 161 34  | 168 23  | 94 31  | 149 51 | 145 22  | 195 52 |
| Oct.  | 1 189 11  | 108 14 | 176 42  | 185 32  | 95 21  | 162 1  | 146 28  | 195 21 |
|       | 12 199 1  | 113 23 | 194 21  | 203 00  | 95 54  | 174 21 | 147 27  | 194 48 |
|       | 22 208 59 | 118 1  | 211 21  | 219 28  | 96 8   | 186 45 | 148 21  | 194 17 |
| Nov.  | 1 218 57  | 122 21 | 227 23  | 235 1   | 96 2R  | 199 11 | 149 6   | 193 45 |
|       | 11 228 59 | 125 11 | 241 11  | 250 4   | 95 11  | 211 41 | 149 44  | 193 13 |
|       | 21 239 5  | 128 50 | 257 11  | 264 5   | 94 51  | 224 13 | 150 11  | 192 41 |
| Dec.  | 1 249 12  | 130 36 | 270 17  | 275 8   | 93 49  | 236 46 | 150 26  | 192 10 |
|       | 11 259 21 | 131 33 | 277 29  | 275 41R | 92 37  | 248 20 | 150 33  | 191 38 |
|       | 21 269 31 | 131 2R | 270 55  | 264 37  | 91 17  | 261 55 | 150 28R | 191 6  |
|       | 31 279 43 | 129 1  | 261 5   | -       | 89 56  | 274 30 | 150 11  | 190 34 |

Ayanamsha : 22° 5' 27"

## Longitude of the Moon

| 1977    | Sun    | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  |        |        |        | 56 9   | 80 7   | 104 53 | 130 31 |
| ■       | 157 2  | 184 3  | 211 50 | 240 51 | 269 22 | 298 11 | 325 56 |
| 23      | 352 7  | 16 48  | 40 33  | ■ 4    | ■ 12   |        |        |
| Feb. 1  |        | 100 37 | 126 19 | 153 8  | 180 ■  | 208 46 | 236 57 |
| 13      | 265 11 | 293 15 | 320 46 | 347 11 | 12 21  | 36 30  | 60 3   |
| 27      | 83 51  |        |        |        |        |        |        |
| March 1 |        | 108 17 | 134 26 | 161 50 | 190 20 | 219 15 | 247 56 |
| 13      | 276 ■  | 303 27 | 329 32 | 355 52 | 20 26  | ■ 28   | 68 3   |
| 27      | 91 48  | 116 21 | 142 18 |        |        |        |        |
| April 1 |        |        |        |        |        |        | 155 53 |
| ■       | 184 18 | 213 52 | 243 ■  | 272 40 | 300 28 | 328 58 | 352 24 |
| 17      | 16 58  | 40 59  | 64 37  | ■ 11   | 112 21 | 137 35 | 163 58 |
| May 1   | 192 20 | 222 10 | 252 40 | 282 22 | 310 30 | 336 53 | 1 54   |
| 15      | 26 2   | 49 45  | 73 23  | 97 8   | 121 21 | 146 25 | 172 44 |
| 29      | 200 45 | 230 28 |        |        |        |        |        |
| June 1  |        |        |        |        |        | 245 43 | 276 43 |
| ■       | 305 41 | 333 10 | 358 18 | 23 8   | ■ 20   | 70 24  | 94 14  |
| 19      | 118 28 | 143 10 | 168 59 | 196 00 | 224 27 | 254 17 |        |
| July 1  |        |        |        |        |        |        | 284 30 |
| 3       | 314 ■  | 341 44 | 7 27   | 31 48  | 55 28  | 79 ■   | 103 8  |
| 17      | 127 47 | 153 ■  | 179 16 | ■ 19   | 234 27 | 263 38 | 293 14 |
| 31      | 322 17 |        |        |        |        |        |        |
| Aug. 1  |        |        |        |        | 336 16 | 2 55   | 27 56  |
| 7       | 51 54  | 75 32  | 90 28  | 124 ■  | 149 41 | 176 27 | 204 17 |
| 21      | 232 ■  | 259 30 | ■ 21   | 316 49 | 344 29 | 10 19  |        |
| Sep. 1  |        |        | 23 28  | 47 54  | 71 41  | 95 25  | 119 47 |
| 11      | 145 17 | 171 51 | 199 31 | 227 49 | 256 21 | 284 43 | 312 40 |
| 25      | 339 55 | 6 13   | 31 37  |        |        |        |        |
| Oct. 1  |        |        |        | ■ 48   | 79 33  | 103 18 | 127 ■  |
| 9       | 153 9  | 180 8  | 208 34 | 237 ■  | 267 7  | 295 10 | 323 ■  |
| ■       | 349 35 | 15 5   | 39 51  | 63 58  | 87 43  |        |        |
| Nov. 1  |        | 99 33  | 123 26 | 148 10 | 174 15 | 202 9  | 231 42 |
| 13      | 261 59 | 291 43 | 319 00 | 345 ■  | 12 1   | ■ 34   | 60 37  |
| 27      | 84 25  | 108 2  |        |        |        |        |        |
| Dec. 1  |        |        | 132 2  | 156 37 | 182 27 | 210 5  | 239 ■  |
| 11      | ■ 51   | 300 44 | 329 31 | 356 ■  | 21 28  | 45 42  | 60 30  |
| ■       | 93 13  | 117 ■  | 141 10 | 165 52 |        |        |        |

Ayanamsa: 22° 5' 27"

## Longitudes of Planets

|       | 1978 | Sun    | Mars.   | Merc.   | Mero.   | Jupit.  | Venus   | Saturn  | Rahu   |
|-------|------|--------|---------|---------|---------|---------|---------|---------|--------|
| Jan.  | 5    | 284 48 | 127 46R | 207 31  | 222 29  | 89 17R  | 280 48  | 149 58R | 120 19 |
|       | 15   | 295 00 | 124 12  | 271 55  | 278 10  | 88 7    | 293 23  | 149 27  | 189 47 |
|       | 25   | 305 10 | 120 14  | 284 59  | 222 12  | 87 9    | 305 57  | 148 49  | 189 16 |
| Feb.  | 5    | 315 50 | 116 35  | 299 45  | 307 37  | 86 22   | 318 30  | 148 11  | 188 43 |
|       | 14   | 326 22 | 113 54  | 315 10  | 324 22  | 86 8    | 331 8   | 147 16  | 188 12 |
|       | 24   | 335 31 | 112 29  | 333 19  | 342 38  | 86 6D   | 343 33  | 146 27  | 187 39 |
| March | 5    | 345 33 | 112 23D | 351 15  | 1 53    | 86 25   | 355 1   | 145 41  | 187 8  |
|       | 16   | 355 33 | 112 26  | 10 11   | 18 36   | 87 2    | 8 28    | 145 00  | 186 36 |
|       | 26   | 5 28   | 115 26  | 23 44   | 26 5    | 87 57   | 20 52   | 144 26  | 186 5  |
| April | 5    | 15 22  | 118 16  | 25 20R  | 22 20   | 89 7    | 33 14   | 144 00  | 185 31 |
|       | 15   | 25 9   | 121 41  | 10 11   | 15 47   | 90 31   | 45 32   | 143 45  | 185 1  |
|       | 25   | 34 55  | 125 39  | 14 50   | 15 53D  | 92 6    | 58 16   | 143 39  | 184 29 |
| May   | 5    | 44 38  | 130 00  | 18 51   | 23 15   | 93 52   | 69 57   | 143 45D | 183 57 |
|       | 15   | 54 18  | 134 41  | 23 55   | 35 43   | 95 45   | 82 3    | 144 00  | 183 25 |
|       | 25   | 63 55  | 139 38  | 43 24   | 52 4    | 97 47   | 94 6    | 144 27  | 182 54 |
| June  | 5    | 74 28  | 144 50  | 61 43   | 72 9    | 99 52   | 106 4   | 145 1   | 182 22 |
|       | 14   | 83 5   | 150 12  | 75 5    | 93 59   | 102 2   | 117 56  | 145 46  | 181 50 |
|       | 24   | 92 37  | 155 47  | 104 21  | 114 46  | 104 15  | 129 40  | 146 37  | 181 16 |
| July  | 4    | 102 10 | 161 30  | 122 39  | 130 27  | 106 29  | 141 17  | 147 11  | 180 47 |
|       | 14   | 111 42 | 167 21  | 137 21  | 143 15  | 108 44  | 152 14  | 148 38  | 180 15 |
|       | 24   | 121 14 | 173 20  | 147 59  | 151 11  | 110 59  | 164 00  | 149 46  | 179 43 |
| Aug.  | 3    | 130 48 | 179 28  | 162 58  | 162 29R | 113 12  | 175 1   | 150 18  | 179 11 |
|       | 13   | 140 23 | 184 42  | 149 52  | 145 48  | 115 22  | 185 42  | 152 12  | 178 40 |
|       | 23   | 150 00 | 192 11  | 141 56  | 140 17  | 117 26  | 195 59  | 153 27  | 178 8  |
| Sep.  | 2    | 159 40 | 198 31  | 141 55D | 146 48  | 119 27  | 205 40  | 154 44  | 177 36 |
|       | 12   | 169 22 | 205 5   | 154 12  | 162 59  | 121 21  | 214 37  | 155 59  | 177 4  |
|       | 22   | 179 7  | 211 47  | 172 16  | 181 28  | 123 8   | 222 24  | 157 13  | 176 32 |
| Oct.  | 2    | 188 57 | 218 34  | 190 24  | 198 59  | 124 40  | 228 12  | 158 24  | 176 1  |
|       | 12   | 198 49 | 225 18  | 207 13  | 215 10  | 126 1   | 232 13  | 159 10  | 175 39 |
|       | 22   | 208 44 | 232 30  | 222 51  | 230 17  | 127 12  | 238 27R | 160 32  | 174 57 |
| Nov.  | 1    | 218 43 | 239 37  | 237 31  | 244 19  | 128 1   | 228 50  | 161 28  | 174 25 |
|       | 11   | 228 44 | 246 50  | 250 41  | 256 13  | 128 44  | 228 57  | 162 17  | 173 54 |
|       | 21   | 238 50 | 254 8   | 258 17  | 261 13R | 129 1   | 218 21  | 162 10  | 173 22 |
| Dec.  | 1    | 248 57 | 261 34  | 258 56  | 252 13  | 129 00R | 217 29D | 163 27  | 172 50 |
|       | 11   | 258 6  | 269 1   | 268 11  | 245 26D | 128 39  | 220 20  | 163 47  | 172 18 |
|       | 21   | 268 16 | 276 39  | 247 44  | 255 35  | 127 59  | 222 14  | 163 56  | 171 46 |
|       | 31   | 279 28 | 284 19  | 258 28  | -       | 127 1   | 233 58  | 164 54R | 171 15 |

Ayanamsa: 22° 6' 17"

1978 A.D.

## RAMAN'S EPHEMERIS

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## Longitude of the Moon

|       | 1978 | Sun.   | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|-------|------|--------|--------|--------|--------|--------|--------|--------|
| Jan.  | 1    | 179 1  | 204 55 | 223 8  | 262 28 | 293 23 | 323 36 | 351 48 |
|       | 15   | 17 55  | 42 34  | 66 21  | 90 5   | 103 55 | 138 10 | 162 58 |
|       | 29   | 188 27 | 214 55 |        |        |        |        |        |
| Feb.  | 1    |        |        |        |        |        | 228 37 | 257 7  |
|       | 5    | 286 53 | 316 44 | 345 45 | 13 3   | 21 35  | 62 52  | 86 21  |
|       | 19   | 110 21 | 134 35 | 159 34 | 185 20 | 211 54 |        |        |
| March | 1    |        |        |        |        |        | 239 20 | 267 34 |
|       | 5    | 296 26 | 325 24 | 353 43 | 20 46  | 46 21  | 70 46  | 94 34  |
|       | 19   | 118 22 | 142 21 | 168 5  | 194 32 | 221 3  | 250 11 | 278 40 |
| April | 1    |        |        |        | 292 53 | 321 11 | 348 50 | 15 45  |
|       | 9    | 41 43  | 66 20  | 90 34  | 114 17 | 138 17 | 163 2  | 189 23 |
|       | 23   | 217 8  | 246 00 | 275 12 | 303 56 |        |        |        |
| May   | 1    |        |        |        |        | 331 48 | 358 44 | 24 48  |
|       | 7    | 50 5   | 74 10  | 98 38  | 123 20 | 146 16 | 171 9  | 197 26 |
|       | 21   | 225 29 | 255 7  | 285 10 | 314 29 | 342 22 | 8 53   |        |
| June  | 1    |        |        | 21 44  | 46 44  | 71 15  | 95 15  | 118 58 |
|       | 11   | 142 40 | 176 54 | 192 15 | 219 23 | 248 30 | 278 27 | 309 24 |
|       | 25   | 338 29 | 5 47   | 31 29  |        |        |        |        |
| July  | 1    |        |        |        | 56 12  | 80 13  | 104 2  | 127 48 |
|       | 9    | 151 36 | 175 53 | 201 11 | 228 8  | 256 59 | 287 22 | 317 59 |
|       | 23   | 347 56 | 15 1   | 40 47  | 65 24  | 89 19  |        |        |
| Aug.  | 1    |        | 101 9  | 124 51 | 148 44 | 172 59 | 197 58 | 224 5  |
|       | 13   | 251 44 | 280 57 | 311 9  | 341 9  | 9 48   | 36 40  | 61 54  |
|       | 27   | 86 4   | 109 49 | 133 31 |        |        |        |        |
| Sep.  | 1    |        |        |        |        |        |        | 145 32 |
|       | 8    | 169 57 | 195 4  | 221 3  | 248 5  | 276 14 | 305 21 | 334 48 |
|       | 17   | 8 44   | 31 26  | 57 2   | 82 17  | 106 11 | 129 52 | 153 54 |
| Oct.  | 1    | 178 43 | 204 5  | 231 18 | 258 55 | 287 6  | 315 37 | 344 6  |
|       | 15   | 12 12  | 39 24  | 65 23  | 90 9   | 114 5  | 137 45 | 161 49 |
|       | 29   | 186 53 | 213 19 |        |        |        |        |        |
| Nov.  | 1    |        |        |        |        |        | 227 13 | 255 15 |
|       | 5    | 283 25 | 312 24 | 340 25 | 7 53   | 34 44  | 60 46  | 85 52  |
|       | 19   | 110 2  | 133 45 | 167 26 | 181 55 | 207 48 | 235 27 |        |
| Dec.  | 1    |        |        |        |        |        |        | 284 33 |
|       | 5    | 294 2  | 322 13 | 351 13 | 18 7   | 44 12  | 69 33  | 94 14  |
|       | 17   | 118 15 | 142 52 | 165 25 | 189 51 | 115 36 | 243 19 | 272 51 |
|       | 31   | 303 14 |        |        |        |        |        |        |

Ayanamasa: 22° 6' 17"



## Longitudes of Planets

| 1979  | Sun | Mars   | Mero.  | Mero.   | Jupit.  | Venus   | Saturn. | Rahu    |        |
|-------|-----|--------|--------|---------|---------|---------|---------|---------|--------|
| Jan.  | 5   | 284 34 | 288 10 | 285 4   | 272 13  | 126 29R | 238 22  | 161 48R | 170 59 |
|       | 15  | 284 45 | 295 57 | 279 38  | 287 16  | 125 15  | 247 53  | 163 31  | 170 27 |
|       | 25  | 304 56 | 301 45 | 295 7   | 303 13  | 123 56  | 258 13  | 163 3   | 169 55 |
| Feb.  | 5   | 315 5  | 311 36 | 311 38  | 320 20  | 122 36  | 269 1   | 162 27  | 169 24 |
|       | 14  | 325 11 | 319 28 | 329 21  | 338 35  | 121 23  | 280 11  | 161 45  | 168 52 |
|       | 24  | 335 18 | 327 23 | 347 45  | 356 24  | 120 11  | 291 11  | 160 57  | 168 20 |
| March | 6   | 345 19 | 335 15 | 3 24    | 7 40    | 119 37  | 303 16  | 160 11  | 167 48 |
|       | 16  | 355 18 | 343 11 | 8 26R   | 5 55    | 119 9   | 314 59  | 159 22  | 167 16 |
|       | 26  | 5 14   | 350 59 | 1 38    | 357 46  | 119 00D | 326 52  | 158 40  | 166 45 |
| April | 5   | 15 11  | 358 48 | 355 49  | 356 10D | 119 11  | 338 48  | 158 11  | 166 19 |
|       | 15  | 24 10  | 3 33   | 358 33  | 2 31    | 119 40  | 350 47  | 157 35  | 165 41 |
|       | 25  | 34 41  | 14 11  | 7 11    | 14 4    | 120 11  | 2 48    | 157 15  | 165 11 |
| May   | 5   | 44 24  | 21 55  | 21 11   | 29 17   | 121 28  | 14 53   | 157 5   | 164 44 |
|       | 15  | 54 11  | 29 30  | 38 8    | 47 49   | 122 43  | 11 58   | 157 7D  | 164 11 |
|       | 25  | 63 11  | 36 59  | 58 14   | 71 20   | 124 11  | 39 4    | 157 18  | 163 34 |
| June  | 5   | 73 16  | 44 22  | 80 3    | 90 28   | 125 11  | 51 12   | 157 39  | 163 11 |
|       | 14  | 82 50  | 51 40  | 100 2   | 108 36  | 127 35  | 63 20   | 158 10  | 162 31 |
|       | 24  | 92 24  | 58 53  | 116 8   | 122 35  | 129 11  | 75 31   | 158 51  | 161 59 |
| July  | 4   | 101 56 | 65 58  | 127 50  | 131 45  | 131 29  | 87 43   | 159 38  | 161 27 |
|       | 14  | 111 28 | 72 58  | 134 1   | 134 21R | 133 33  | 99 56   | 160 32  | 160 55 |
|       | 24  | 121 00 | 79 51  | 132 57  | 129 33  | 135 55  | 112 12  | 161 32  | 160 23 |
| Aug.  | 3   | 130 34 | 86 37  | 125 56  | 123 39  | 137 53  | 124 31  | 161 39  | 159 51 |
|       | 13  | 140 9  | 93 16  | 123 28D | 126 22  | 140 1   | 136 50  | 163 48  | 159 20 |
|       | 23  | 149 46 | 101 49 | 132 4   | 140 00  | 142 15  | 149 14  | 164 59  | 158 48 |
| Sep.  | 2   | 159 26 | 106 12 | 149 13  | 158 54  | 144 26  | 161 36  | 166 15  | 158 16 |
|       | 12  | 169 11 | 112 28 | 168 29  | 177 42  | 146 34  | 174 1   | 167 30  | 157 44 |
|       | 22  | 178 54 | 118 34 | 186 29  | 194 52  | 148 37  | 186 27  | 168 45  | 157 13 |
| Oct.  | 2   | 188 11 | 124 31 | 202 51  | 210 30  | 150 36  | 198 55  | 169 59  | 156 41 |
|       | 12  | 198 11 | 130 15 | 217 50  | 224 45  | 152 29  | 211 11  | 171 10  | 156 9  |
|       | 22  | 208 29 | 135 17 | 231 11  | 237 8   | 154 13  | 223 50  | 172 17  | 155 37 |
| Nov.  | 1   | 218 28 | 141 5  | 242 1   | 246 12  | 155 48  | 236 17  | 173 20  | 155 6  |
|       | 11  | 228 29 | 145 6  | 245 11  | 242 1   | 157 11  | 248 44  | 174 18  | 154 34 |
|       | 21  | 238 11 | 150 11 | 235 29  | 230 27  | 158 20  | 261 11  | 175 9   | 154 11 |
| Dec.  | 1   | 248 42 | 154 57 | 229 56D | 235 13  | 159 14  | 273 11  | 177 00  | 153 30 |
|       | 11  | 258 51 | 158 58 | 239 11  | 245 12  | 159 53  | 286 1   | 177 00R | 152 59 |
|       | 21  | 269 11 | 161 39 | 252 18  | 259 11  | 160 13  | 298 25  | 176 49  | 152 27 |
|       | 31  | 279 11 | 163 54 | 267 12  | -       | 160 13R | 310 47  | 176 28  | 151 55 |

Ayanamsa: 22° 7' 7"

1979 A.D.

## RAMAN'S EPHEMERIS

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## Longitude of the Moon

| 1979    | Sun.   | Tue.   | Thurs. | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  |        |        |        |        | 317 47 | 347 29 | 15 5   |
| 7       | 41 17  | 28     | 27     | 114 55 | 138 22 | 111 14 | 186 8  |
| 21      | 211 1  | 237 28 | 265 51 | 295 58 | 326 37 | 356 25 |        |
| Feb. 1  |        |        | 10 48  | 17 22  | 52 22  | 88 1   | 111 55 |
| 11      | 136 33 | 159 13 | 183 11 | 207 43 | 232 20 | 260 25 | 289 12 |
| 25      | 319 17 | 349 36 |        |        |        |        |        |
| March 1 |        |        | 18 56  | 46 31  | 72 21  | 96 51  | 120 37 |
| 11      | 144 12 | 168 1  | 192 26 | 217 26 | 243 24 | 270 30 | 298 46 |
| 25      | 328 2  | 357 43 | 26 48  | 56 30  |        |        |        |
| April 1 | 77 44  | 93 1   | 117 8  | 140 43 | 164 26 | 188 47 | 214 2  |
| 15      | 240 18 | 267 25 | 295 14 | 323 35 | 352 17 | 20 56  | 48 55  |
| 29      | 75 39  |        |        |        |        |        |        |
| May 1   |        | 100 56 | 125 5  | 148 51 | 172 22 | 197 2  | 222 52 |
| 13      | 249 56 | 277 54 | 295 14 | 314 22 | 2 29   | 30 26  | 57 35  |
| 27      | 52 48  | 108 24 | 132 58 |        |        |        |        |
| June 1  |        |        |        |        |        |        | 144 47 |
| 11      | 168 23 | 192 32 | 217 56 | 244 54 | 272 17 | 297 21 | 331 17 |
| 17      | 359 33 | 27 5   | 53 51  | 79 49  | 104 56 | 129 11 | 153 52 |
| July 1  | 176 25 | 200 34 | 226 58 | 253 7  | 281 59 | 311 48 | 341 29 |
| 15      | 10 9   | 37 35  | 63 53  | 89 12  | 113 46 | 137 22 | 161 17 |
| 29      | 184 51 | 209 00 |        |        |        |        |        |
| Aug. 1  |        |        |        |        |        | 321 27 | 247 36 |
| 5       | 275 35 | 305 13 | 335 37 | 5 30   | 33 59  | 60 51  | 86 30  |
| 19      | 110 22 | 134 41 | 158 15 | 181 50 | 205 47 | 229 20 | 256 48 |
| Sep. 1  |        |        |        | 270 6  | 298 39 | 328 28 | 359 7  |
| 9       | 28 49  | 56 52  | 83 5   | 107 50 | 131 44 | 155 17 | 178 54 |
| 23      | 202 54 | 227 30 | 253 00 | 279 39 |        |        |        |
| Oct. 1  |        |        |        |        | 307 43 | 337 6  | 7 13   |
| 7       | 36 57  | 65 14  | 91 40  | 110 59 | 140 18 | 163 49 | 187 34 |
| 21      | 211 59 | 237 10 | 263 10 | 290 2  | 317 45 | 346 27 |        |
| Nov. 1  |        |        | 1 5    | 30 28  | 59 16  | 86 38  | 112 18 |
| 11      | 136 35 | 160 10 | 183 47 | 208 6  | 233 27 | 259 47 | 286 59 |
| 25      | 314 38 | 342 42 | 11 4   |        |        |        |        |
| Dec. 1  |        |        |        | 39 32  | 67 33  | 94 30  | 120 2  |
| 9       | 144 21 | 167 58 | 191 38 | 216 3  | 241 44 | 268 47 | 296 52 |
| 23      | 325 21 | 353 45 | 21 51  | 49 30  | 76 35  |        |        |

Ayanamsa: 22° 7' 7"

## Longitudes of Planets

| 1980  | Sun       | Mars.   | Mer.    | Mer.    | Jupit.  | Venus  | Saturn  | Rahu   |
|-------|-----------|---------|---------|---------|---------|--------|---------|--------|
| Jan.  | 5 224 14  | 164 50  | 274 54  | 333 55  | 160 5R  | 328 56 | 177 1   | 151 38 |
|       | 15 224 30 | 165 21  | 275 28  | 300 40  | 158 37  | 329 13 | 176 57R | 151 7  |
|       | 25 224 41 | 164 48R | 275 29  | 316 10  | 158 50  | 341 24 | 176 42  | 150 38 |
| Feb.  | 4 214 50  | 162 56  | 285 00  | 333 45  | 157 50  | 333 27 | 176 17  | 149 4  |
|       | 14 224 58 | 169 54  | 241 48  | 345 8   | 156 37  | 323    | 175 44  | 148 11 |
|       | 24 235 2  | 158 4   | 351 22  | 350 30R | 155 19  | 17 5   | 175 5   | 149 00 |
| March | 5 345 4   | 157 17  | 348 33  | 341 36  | 154 1   | 28 33  | 174 20  | 148 11 |
|       | 15 255 3  | 148 55  | 338 18  | 337 28D | 152 48  | 39 43  | 173 33  | 147 57 |
|       | 25 5 00   | 148 45  | 338 50  | 342 22  | 151 45  | 50 28  | 172 48  | 147 25 |
| April | 4 14 52   | 145 53  | 347 10  | 353 1   | 150 59  | 60 40  | 172 00  | 146 53 |
|       | 14 24 41  | 146 16D | 359 45  | 7 14    | 150 28  | 70 11  | 171 22  | 146 22 |
|       | 24 34 27  | 147 43  | 15 28   | 24 23   | 150 15  | 78 39  | 170 51  | 145 40 |
| May   | 4 44 10   | 155 11  | 34 1    | 34 21   | 150 21D | 85 42  | 170 28  | 145 14 |
|       | 14 53 50  | 153 13  | 55 9    | 55 8    | 150 45  | 90 30  | 170 14  | 144 46 |
|       | 24 63 28  | 158 57  | 76 50   | 85 51   | 151 24  | 92 35  | 170 12D | 144 11 |
| June  | 3 73 3    | 161 10  | 94 10   | 101 14  | 152 21  | 99 43R | 170 19  | 143 43 |
|       | 13 82 37  | 165 47  | 107 4   | 111 26  | 153 31  | 85 29  | 170 36  | 143 11 |
|       | 23 92 10  | 170 47  | 114 13  | 115 9   | 154 53  | 79 33  | 171 4   | 142 39 |
| July  | 1 101 42  | 176 1   | 114 11E | 111 41  | 156 27  | 76 15  | 171 39  | 142 7  |
|       | 11 111 14 | 181 33  | 108 30  | 108 57  | 158 10  | 76 51D | 172 24  | 141 35 |
|       | 21 120 58 | 187 12  | 105 15D | 106 50  | 160 00  | 80 43  | 173 15  | 141 4  |
| Aug.  | 2 130 20  | 193 13  | 110 58  | 117 24  | 161 56  | 86 56  | 174 12  | 140 33 |
|       | 12 139 58 | 199 22  | 115 46  | 135 23  | 163 57  | 94 47  | 175 16  | 140 00 |
|       | 22 149 32 | 205 40  | 145 27  | 155 21  | 165 2   | 103 46 | 176 23  | 139 25 |
| Sep.  | 1 159 11  | 212 8   | 164 51  | 173 51  | 168 10  | 113 33 | 177 34  | 138 57 |
|       | 11 168 53 | 218 42  | 182 22  | 190 23  | 170 21  | 122 52 | 178 46  | 138 25 |
|       | 21 178 40 | 225 31  | 198 1   | 205 11  | 172 31  | 134 49 | 180 1   | 137 53 |
| Oct.  | 1 188 28  | 232 25  | 211 53  | 215 2   | 174 40  | 146 11 | 181 15  | 137 21 |
|       | 11 198 20 | 239 22  | 223 23  | 227 31  | 176 47  | 157 50 | 182 28  | 136 50 |
|       | 21 208 15 | 246 38  | 229 49  | 229 10R | 178 49  | 169 20 | 183 40  | 136 18 |
|       | 31 218 13 | 253 41  | 234 49  | 218 27  | 180 48  | 181 18 | 184 49  | 135 46 |
| Nov.  | 10 228 11 | 261 19  | 213 47  | 214 39D | 182 40  | 193 23 | 185 52  | 135 14 |
|       | 20 238 10 | 268 49  | 218 52  | 225 00  | 184 23  | 205 37 | 186 51  | 134 43 |
|       | 30 248 27 | 275 39  | 232 3   | 235 30  | 185 58  | 217 56 | 187 43  | 134 11 |
| Dec.  | 10 258 36 | 284 5   | 247 9   | 254 52  | 187 50  | 230 23 | 188 26  | 133 39 |
|       | 20 268 47 | 291 50  | 262 30  | 270 28  | 188 29  | 242 48 | 189 3   | 133 7  |
|       | 30 278 58 | 299 40  | 278 25  | -       | 189 29  | 255 14 | 189 50  | 132 35 |

Ayanamsa: 22° 7' 57"

1980 A.D.

## RAMAN'S EPHEMERIS

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## Longitude of the Moon

| 1980    | Sun.   | Tue.   | Thur.  | Sat.   | Mon.   | Wed.   | Fri.   |
|---------|--------|--------|--------|--------|--------|--------|--------|
| Jan. 1  |        | 89 49  | 115 30 | 140 0  | 164 00 | 187 33 | 211 38 |
| 13      | 236 29 | 262 22 | 281 11 | 320 11 | 340 50 | 18 9   | 46 27  |
| 27      | 73 16  | 99 7   | 124 6  |        |        |        |        |
| Feb. 1  |        |        |        |        |        |        | 136 20 |
| 3       | 160 18 | 183 55 | 207 35 | 231 54 | 257 27 | 284 44 | 313 44 |
| 17      | 343 51 | 13 54  | 42 51  | 70 15  | 96 10  | 121 00 | 145 7  |
| March 1 |        |        |        | 157 1  | 180 35 | 204 19 | 228 20 |
| 9       | 253 10 | 279 16 | 307 4  | 336 39 | 7 11   | 36 54  | 66 6   |
| 23      | 92 56  | 118 5  | 142 11 | 165 50 | 189 27 |        |        |
| April 1 |        | 201 9  | 226 22 | 249 59 | 275 28 | 302 9  | 330 21 |
| 13      | 0 7    | 30 31  | 60 19  | 88 24  | 114 29 | 139 2  | 162 16 |
| 27      | 186 18 | 210 9  |        |        |        |        |        |
| May 1   |        |        | 234 35 | 259 39 | 285 31 | 312 16 | 340 10 |
| 11      | 9 14   | 39 2   | 68 27  | 96 30  | 122 41 | 147 19 | 171 6  |
| 25      | 194 42 | 218 44 | 243 33 | 269 15 |        |        |        |
| June 1  | 282 24 | 309 15 | 336 48 | 5 3    | 33 54  | 62 48  | 90 58  |
| 15      | 117 47 | 143 5  | 167 14 | 190 54 | 214 44 | 239 22 | 265 4  |
| 29      | 291 53 |        |        |        |        |        |        |
| July 1  |        | 319 33 | 347 42 | 16 6   | 44 27  | 72 29  | 99 46  |
| 13      | 126 59 | 151 1  | 175 8  | 198 49 | 222 41 | 247 22 | 273 20 |
| 27      | 300 43 | 329 14 | 358 10 |        |        |        |        |
| Aug. 1  |        |        |        |        |        |        | 12 44  |
| 3       | 41 20  | 69 9   | 86 4   | 122 1  | 147 3  | 170 50 | 195 5  |
| 17      | 218 42 | 242 55 | 268 8  | 294 54 | 323 20 | 353 00 | 22 53  |
| 31      | 51 59  |        |        |        |        |        |        |
| Sep. 1  |        |        |        |        | 66 1   | 93 4   | 118 51 |
| 7       | 143 41 | 167 55 | 191 44 | 215 22 | 239 14 | 263 43 | 289 28 |
| 21      | 316 55 | 346 15 | 16 44  | 44 3   | 75 58  |        |        |
| Oct. 1  |        |        |        |        |        | 103 00 | 128 29 |
| 5       | 152 55 | 176 49 | 200 30 | 224 13 | 248 11 | 272 44 | 298 17 |
| 19      | 323 23 | 254 39 | 24 53  | 53 32  | 84 54  | 112 14 | 137 42 |
| Nov. 1  |        |        |        | 149 57 | 173 52 | 197 29 | 221 15 |
| 9       | 245 18 | 269 19 | 294 59 | 321 12 | 346 50 | 18 5   | 47 21  |
| 23      | 78 23  | 106 29 | 143 34 | 168 28 |        |        |        |
| Dec. 1  |        |        |        |        | 182 25 | 206 3  | 229 53 |
| 7       | 254 16 | 279 18 | 305 1  | 331 33 | 359 5  | 27 44  | 57 8   |
| 21      | 86 26  | 114 42 | 140 51 | 166 26 | 190 29 | 214 9  |        |

Ayanamsa: 22° 7' 57"

# RAMAN'S EPHEMERIS Longitudes of Planets

1981 A.D.

| 1981  | Sun       | Mars   | Merc.   | Merc.   | Jupit.  | Venus  | Saturn  | Rabu   |
|-------|-----------|--------|---------|---------|---------|--------|---------|--------|
| Jan.  | 5 285 05  | 304 22 | 288 08  | 296 24  | 189 48  | 262 46 | 189 37  | 132 16 |
|       | 15 295 16 | 312 45 | 304 47  | 313 12  | 190 15  | 275 17 | 189 46  | 131 44 |
|       | 25 305 27 | 320 09 | 321 19  | 328 30  | 190 23R | 287 48 | 189 44R | 131 13 |
| Feb.  | 4 315 35  | 328 04 | 333 30  | 334 48R | 190 12  | 300 19 | 189 32  | 130 41 |
|       | 14 325 43 | 335 58 | 331 51  | 326 26  | 189 42  | 312 49 | 189 09  | 130 09 |
|       | 24 335 48 | 343 52 | 321 48  | 319 53D | 188 56  | 325 19 | 188 38  | 129 37 |
| March | 6 345 50  | 351 43 | 320 45  | 323 43  | 187 55  | 337 48 | 187 59  | 129 06 |
|       | 16 355 49 | 359 32 | 328 13  | 333 49  | 186 43  | 350 16 | 187 15  | 128 34 |
|       | 26 5 44   | 7 17   | 340 16  | 347 26  | 185 27  | 2 43   | 186 29  | 128 02 |
| April | 5 15 37   | 14 59  | 355 14  | 3 39    | 184 10  | 15 08  | 185 42  | 127 30 |
|       | 15 25 26  | 22 36  | 12 42   | 22 23   | 182 59  | 27 31  | 184 58  | 126 58 |
|       | 25 35 11  | 30 09  | 32 40   | 43 22   | 181 58  | 39 53  | 184 18  | 126 27 |
| May   | 5 44 54   | 37 31  | 54 03   | 64 07   | 181 11  | 52 13  | 183 45  | 125 55 |
|       | 15 54 33  | 45 00  | 73 06   | 80 43   | 180 40  | 64 32  | 183 21  | 125 23 |
|       | 25 64 11  | 52 17  | 86 52   | 91 26   | 180 27D | 76 48  | 183 05  | 124 51 |
| June  | 4 73 46   | 59 29  | 94 18   | 95 12   | 180 32  | 89 04  | 182 59  | 124 20 |
|       | 14 83 20  | 66 36  | 94 18R  | 91 58   | 180 55  | 101 18 | 183 04  | 123 48 |
|       | 24 92 52  | 73 37  | 89 08   | 86 58   | 181 34  | 113 29 | 183 18  | 123 16 |
| July  | 4 102 24  | 80 32  | 86 23D  | 87 49   | 182 29  | 125 40 | 183 43  | 122 44 |
|       | 14 111 57 | 87 23  | 91 23   | 97 00   | 183 38  | 137 48 | 184 16  | 122 12 |
|       | 24 121 29 | 94 08  | 104 18  | 113 31  | 184 59  | 149 54 | 184 57  | 121 41 |
| Aug.  | 3 131 03  | 100 48 | 123 33  | 133 56  | 186 31  | 161 57 | 185 46  | 121 09 |
|       | 13 140 38 | 107 22 | 144 05  | 153 44  | 188 12  | 173 57 | 186 42  | 120 37 |
|       | 23 150 15 | 113 52 | 162 49  | 171 20  | 190 02  | 185 52 | 187 43  | 120 05 |
| Sep.  | 2 159 55  | 120 16 | 179 19  | 186 46  | 191 58  | 197 43 | 188 49  | 119 34 |
|       | 12 169 18 | 126 35 | 193 40  | 199 58  | 193 59  | 209 28 | 189 58  | 119 02 |
|       | 22 179 23 | 132 48 | 205 31  | 210 01  | 196 05  | 221 07 | 191 10  | 118 30 |
| Oct.  | 2 189 12  | 138 55 | 213 01  | 213 46R | 198 13  | 232 37 | 192 23  | 117 58 |
|       | 12 199 04 | 144 56 | 211 25  | 206 06  | 200 23  | 243 56 | 193 37  | 117 26 |
|       | 22 209 00 | 150 50 | 200 29  | 198 17  | 202 33  | 255 01 | 194 50  | 116 55 |
| Nov.  | 1 218 59  | 156 35 | 200 30D | 205 52  | 204 43  | 265 47 | 196 01  | 116 23 |
|       | 11 229 01 | 162 12 | 212 51  | 220 29  | 206 50  | 276 05 | 197 09  | 115 51 |
|       | 21 239 05 | 167 38 | 228 22  | 236 16  | 208 53  | 285 45 | 198 13  | 115 19 |
| Dec.  | 1 249 13  | 172 52 | 244 09  | 252 00  | 210 51  | 294 27 | 199 12  | 114 48 |
|       | 11 259 22 | 177 51 | 259 52  | 267 45  | 212 43  | 301 44 | 200 04  | 114 16 |
|       | 21 269 32 | 182 32 | 275 41  | 283 41  | 214 27  | 306 52 | 200 49  | 113 44 |
|       | 31 279 42 | 186 51 | 291 41  | —       | 216 00  | 308 53 | 201 25  | 113 12 |

Ayanamsa : 22° 47'

# RAMAN'S EPHEMERIS Longitude of the Moon

| 1981  | Sun. | Tues.  | Thurs. | Sat.   | Mon.   | Wed.   | Fri.   |
|-------|------|--------|--------|--------|--------|--------|--------|
| Jan.  | 1    |        | 221 05 | 250 22 | 270 00 | 301 33 | 328 28 |
|       | 11   | 356 05 | 24 14  | 52 41  | 81 06  | 108 59 | 135 52 |
|       | 25   | 186 09 | 210 05 | 233 54 | 258 14 |        |        |
| Feb.  | 1    | 270 45 | 296 44 | 323 59 | 352 14 | 20 55  | 49 28  |
|       | 15   | 104 50 | 131 23 | 157 04 | 181 54 | 206 03 | 234 50 |
|       |      |        |        |        |        |        | 253 47 |
| March | 1    | 278 31 | 304 35 | 332 17 | 1 21   | 30 58  | 60 08  |
|       | 15   | 115 01 | 140 51 | 165 54 | 190 21 | 214 20 | 238 05 |
|       | 29   | 286 36 | 312 32 |        |        |        |        |
| April | 1    |        |        |        |        | 326 10 | 354 50 |
|       | 5    | 240 53 | 55 07  | 84 19  | 111 52 | 137 55 | 162 53 |
|       | 19   | 211 09 | 234 55 | 258 44 | 282 56 | 308 02 | 334 39 |
| May   | 1    |        |        |        |        |        | 3 07   |
|       | 3    | 33 12  | 63 45  | 93 22  | 121 14 | 147 21 | 172 11 |
|       | 17   | 32 04  | 243 51 | 267 49 | 292 14 | 317 28 | 343 59 |
|       | 31   | 41 48  |        |        |        |        | 12 08  |
| June  | 1    |        |        |        | 56 57  | 87 05  | 116 01 |
|       | 7    | 143 11 | 168 43 | 193 07 | 216 57 | 240 44 | 264 46 |
|       | 21   | 314 30 | 340 38 | 7 57   | 36 30  | 65 57  | 289 17 |
| July  | 1    |        |        |        |        | 95 30  | 124 10 |
|       | 5    | 151 21 | 176 60 | 201 28 | 225 20 | 249 10 | 273 25 |
|       | 19   | 324 17 | 351 03 | 18 41  | 47 01  | 75 47  | 104 28 |
| Aug.  | 1    |        |        |        | 146 05 | 172 20 | 197 20 |
|       | 9    | 245 16 | 269 20 | 294 12 | 320 12 | 347 21 | 15 22  |
|       | 23   | 72 12  | 100 17 | 127 50 | 154 37 | 180 28 | 43 48  |
| Sep.  | 1    |        | 193 00 | 217 26 | 241 16 | 265 05 | 289 32 |
|       | 13   | 342 22 | 10 52  | 40 01  | 68 57  | 97 07  | 124 22 |
|       | 27   | 176 27 | 201 23 |        |        |        |        |
| Oct.  | 1    |        |        | 225 36 | 249 21 | 273 05 | 297 25 |
|       | 15   | 350 29 | 19 36  | 49 34  | 79 12  | 107 37 | 134 41 |
|       | 29   | 185 41 | 210 09 | 234 08 | 257 48 |        |        |
| Nov.  | 1    | 269 37 | 293 30 | 318 17 | 344 36 | 12 52  | 42 48  |
|       | 15   | 103 01 | 131 07 | 157 34 | 182 46 | 207 10 | 231 05 |
|       | 29   | 278 28 |        |        |        |        |        |
| Dec.  | 1    |        | 302 28 | 327 14 | 353 21 | 21 14  | 50 50  |
|       | 15   | 111 20 | 139 34 | 166 40 | 191 54 | 216 08 | 239 54 |
|       | 29   | 287 27 | 311 48 | 336 54 |        |        |        |

Ayanamsa : 22° 8' 47"

# RAMAN'S EPHEMERIS Longitudes of Planets

1982 A.D.

| 1982  | Sun       | Mars    | Merc.   | Merc.  | Jupit.  | Venus   | Saturn  | Rahu   |
|-------|-----------|---------|---------|--------|---------|---------|---------|--------|
| Jan.  | 5 284 50  | 188 51  | 299 41  | 307 16 | 216 42  | 308 26R | 201 40  | 112 56 |
|       | 15 295 01 | 192 27  | 313 46  | 317 55 | 217 58  | 304 33  | 202 01  | 112 25 |
|       | 25 305 12 | 195 27  | 318 08R | 313 56 | 218 58  | 298 35  | 202 13  | 111 11 |
| Feb.  | 4 315 21  | 197 39  | 307 57  | 303 51 | 219 43  | 294 12  | 202 04  | 111 21 |
|       | 14 325 28 | 198 56  | 303 01D | 304 56 | 220 10  | 293 37D | 202 04  | 110 49 |
|       | 24 335 33 | 199 05R | 308 46  | 313 54 | 220 19  | 296 46  | 201 44  | 110 18 |
| March | 6 345 35  | 197 59  | 319 57  | 326 42 | 220 09R | 302 37  | 201 15  | 109 46 |
|       | 16 355 34 | 195 37  | 334 02  | 341 55 | 219 41  | 310 18  | 200 38  | 109 14 |
|       | 26 5 30   | 192 14  | 350 21  | 359 19 | 218 56  | 319 13  | 199 56  | 108 42 |
| April | 5 15 22   | 188 24  | 8 51    | 18 56  | 217 56  | 328 58  | 199 11  | 108 11 |
|       | 15 25 11  | 184 49  | 29 24   | 39 52  | 216 47  | 339 18  | 198 25  | 107 39 |
|       | 25 34 57  | 182 06  | 49 43   | 58 21  | 215 31  | 350 03  | 197 40  | 107 07 |
| May   | 5 44 40   | 180 38  | 65 24   | 70 37  | 214 15  | 1 06    | 196 11  | 106 35 |
|       | 15 54 19  | 180 28D | 73 54   | 75 09R | 213 04  | 12 22   | 196 25  | 106 03 |
|       | 25 63 57  | 181 30  | 74 26   | 72 15  | 212 02  | 23 11   | 195 58  | 105 32 |
| June  | 4 73 32   | 183 36  | 69 30   | 67 20  | 211 14  | 35 22   | 195 39  | 105 00 |
|       | 14 83 06  | 186 34  | 66 38D  | 67 47  | 210 42  | 47 02   | 195 30  | 104 28 |
|       | 24 92 39  | 190 15  | 70 49   | 75 37  | 210 27  | 58 49   | 195 31D | 103 56 |
| July  | 4 102 11  | 194 31  | 82 04   | 90 03  | 210 30D | 70 40   | 195 42  | 103 24 |
|       | 14 111 43 | 199 17  | 99 23   | 109 40 | 210 51  | 82 35   | 196 03  | 102 53 |
|       | 24 121 16 | 204 28  | 119 47  | 130 43 | 211 29  | 94 36   | 196 33  | 102 21 |
| Aug.  | 3 130 49  | 210 00  | 140 36  | 149 51 | 212 22  | 106 41  | 197 12  | 101 49 |
|       | 13 140 24 | 215 51  | 158 27  | 166 25 | 213 30  | 118 50  | 197 58  | 101 17 |
|       | 23 150 02 | 221 58  | 173 46  | 180 27 | 214 51  | 126 03  | 198 51  | 100 46 |
| Sep.  | 2 159 41  | 228 19  | 186 24  | 191 26 | 216 23  | 143 21  | 199 50  | 100 14 |
|       | 12 169 23 | 234 54  | 195 14  | 197 18 | 218 05  | 155 42  | 200 53  | 99 42  |
|       | 22 179 9  | 241 40  | 196 59  | 193 45 | 219 55  | 168 06  | 202 01  | 99 10  |
| Oct.  | 2 188 58  | 248 38  | 198 23  | 183 40 | 221 52  | 180 33  | 203 11  | 98 39  |
|       | 12 198 50 | 255 45  | 182 35D | 185 43 | 223 55  | 193 02  | 204 24  | 98 07  |
|       | 22 208 45 | 263 01  | 191 47  | 199 20 | 226 02  | 205 33  | 205 37  | 97 35  |
| Nov.  | 1 218 44  | 270 24  | 207 27  | 215 41 | 228 13  | 218 06  | 206 49  | 97 03  |
|       | 11 228 46 | 277 55  | 223 51  | 231 54 | 230 25  | 230 38  | 208 00  | 96 31  |
|       | 21 238 51 | 285 31  | 239 51  | 247 42 | 232 37  | 243 12  | 209 08  | 96 00  |
| Dec.  | 1 248 58  | 293 13  | 255 30  | 263 17 | 234 49  | 255 45  | 210 13  | 95 28  |
|       | 11 259 07 | 300 11  | 271 02  | 278 44 | 236 58  | 268 19  | 211 12  | 94 56  |
|       | 21 269 18 | 308 46  | 286 14  | 293 14 | 239 04  | 280 52  | 212 06  | 94 24  |
|       | 31 279 29 | 316 37  | 299 01  | —      | 241 05  | 293 25  | 212 52  | 93 53  |

Ayanamsa : 22° 9' 38"



1982 A.D.

## RAMAN'S EPHEMERIS

185

## Longitude of the Moon

| 1982  | Sun. | Tues.  | Thurs  | Sat.   | Mon.   | Wed.   | Fri.   |
|-------|------|--------|--------|--------|--------|--------|--------|
| Jan.  | 1    |        |        |        |        |        | 349 50 |
|       | 3    | 16 39  | 44 54  | 74 22  | 104 19 | 133 40 | 187 48 |
|       | 17   | 212 36 | 236 32 | 260 11 | 284 04 | 308 34 | 0 02   |
|       | 31   | 27 07  |        |        |        |        |        |
| Feb.  | 1    |        |        |        | 40 59  | 69 21  | 98 17  |
|       | 7    | 127 17 | 155 37 | 182 40 | 208 16 | 232 38 | 256 23 |
|       | 21   | 304 32 | 329 57 | 356 28 | 23 54  |        | 280 09 |
| March | 1    |        |        |        | 51 53  | 80 05  | 108 20 |
|       | 7    | 136 25 | 163 58 | 190 36 | 216 03 | 240 26 | 264 11 |
|       | 21   | 312 28 | 338 14 | 5 27   | 33 47  | 62 32  | 91 04  |
| April | 1    |        | 105 07 | 132 48 | 159 52 | 186 14 | 211 46 |
|       | 11   | 236 23 | 260 18 | 283 56 | 307 58 | 333 05 | 359 49 |
|       | 25   | 57 38  | 87 06  | 115 46 |        |        | 28 18  |
| May   | 1    |        |        | 143 22 | 169 56 | 195 38 | 220 35 |
|       | 9    | 244 50 | 268 36 | 292 13 | 316 13 | 341 17 | 7 59   |
|       | 23   | 66 20  | 96 25  | 125 40 | 153 30 | 179 56 |        |
| June  | 1    |        | 192 42 | 217 32 | 241 43 | 265 28 | 289 04 |
|       | 13   | 337 25 | 3 09   | 30 34  | 59 40  | 89 51  | 119 59 |
|       | 27   | 176 22 | 202 09 |        |        |        | 148 60 |
| July  | 1    |        | 226 45 | 250 40 | 278 14 | 297 59 | 322 04 |
|       | 11   | 346 50 | 12 39  | 39 50  | 68 30  | 98 17  | 128 19 |
|       | 25   | 185 07 | 211 01 | 235 34 | 259 22 |        |        |
| Aug.  | 1    | 271 10 | 294 53 | 319 02 | 343 53 | 9 34   | 36 13  |
|       | 15   | 92 38  | 122 02 | 151 22 | 179 44 | 206 31 | 231 44 |
|       | 29   | 279 29 | 303 19 |        |        |        | 63 55  |
| Sep.  | 1    |        |        |        |        | 315 28 | 340 27 |
|       | 5    | 6 22   | 33 09  | 60 36  | 88 39  | 117 09 | 145 50 |
|       | 19   | 201 24 | 227 16 | 251 51 | 275 38 | 299 20 | 323 38 |
| Oct.  | 1    |        |        |        |        |        | 349 01 |
|       | 3    | 15 39  | 58 15  | 71 22  | 99 36  | 127 45 | 155 41 |
|       | 17   | 209 46 | 235 17 | 259 43 | 283 28 | 307 09 | 331 28 |
|       | 31   | 24 10  |        |        |        |        | 357 03 |
| Nov.  | 1    |        |        |        | 38 14  | 67 01  | 96 01  |
|       | 7    | 124 35 | 152 27 | 179 32 | 205 49 | 231 14 | 255 48 |
|       | 21   | 303 16 | 327 08 | 351 56 | 18 15  | 46 18  |        |
| Dec.  | 1    |        |        |        |        | 75 42  | 105 32 |
|       | 5    | 134 49 | 162 56 | 189 46 | 215 27 | 240 15 | 264 23 |
|       | 19   | 311 41 | 335 34 | 0 15   | 26 19  | 54 08  | 83 36  |
|       |      |        |        |        |        |        | 113 56 |

Ayanamsa : 22° 9' 38"

## Longitudes of Planets

| 1983  | Sun       | Mars   | Merc.   | Merc.   | Jupit.  | Venus   | Sat.    | Rahu  |
|-------|-----------|--------|---------|---------|---------|---------|---------|-------|
| Jan.  | 5 284 35  | 320 32 | 302 18  | 301 26R | 242 03  | 299 42  | 213 12  | 93 37 |
|       | 15 294 46 | 328 24 | 296 15R | 290 06  | 243 53  | 312 13  | 213 45  | 93 05 |
|       | 25 304 57 | 336 15 | 286 47  | 287 01D | 245 34  | 324 44  | 214 09  | 92 33 |
| Feb.  | 4 315 06  | 344 04 | 289 54D | 294 21  | 247 04  | 337 12  | 214 22  | 91 58 |
|       | 14 325 13 | 351 52 | 300 08  | 306 32  | 248 21  | 349 37  | 214 26R | 91 30 |
|       | 24 335 18 | 359 37 | 313 31  | 320 59  | 249 25  | 1 59    | 214 18  | 90 58 |
| March | 6 345 21  | 7 18   | 328 54  | 337 16  | 250 12  | 14 16   | 214 01  | 90 26 |
|       | 16 355 20 | 14 55  | 346 07  | 355 28  | 250 43  | 26 28   | 213 34  | 89 54 |
|       | 26 1 16   | 22 28  | 5 18    | 15 29   | 250 55  | 38 34   | 213 00  | 89 22 |
| April | 5 15 08   | 29 56  | 25 39   | 35 12   | 250 11R | 50 33   | 212 20  | 88 51 |
|       | 15 24 57  | 37 20  | 43 24   | 49 42   | 250 23  | 62 23   | 211 36  | 88 19 |
|       | 25 34 43  | 44 38  | 53 46   | 55 28   | 249 41  | 74 03   | 210 50  | 87 47 |
| May   | 5 44 26   | 51 52  | 54 56R  | 52 40R  | 248 44  | 11 32   | 210 05  | 87 15 |
|       | 15 54 06  | 59 00  | 49 43   | 47 20   | 247 36  | 96 45   | 209 24  | 86 44 |
|       | 25 63 43  | 66 04  | 46 25   | 47 21D  | 246 22  | 107 41  | 208 47  | 86 12 |
| June  | 4 73 18   | 73 02  | 50 04D  | 54 25   | 245 06  | 118 12  | 208 18  | 85 40 |
|       | 14 82 52  | 79 56  | 60 13   | 67 21   | 243 53  | 128 13  | 207 57  | 85 08 |
|       | 24 92 25  | 86 46  | 75 44   | 85 17   | 242 50  | 137 31  | 207 45  | 84 37 |
| July  | 4 101 57  | 93 31  | 95 43   | 106 32  | 241 59  | 145 50  | 207 43D | 84 05 |
|       | 14 111 29 | 100 12 | 117 10  | 127 15  | 241 24  | 152 44  | 207 51  | 83 33 |
|       | 24 121 02 | 106 49 | 136 38  | 145 16  | 241 06  | 157 35  | 208 09  | 83 01 |
| Aug.  | 3 130 45  | 113 22 | 153 11  | 160 23  | 241 06D | 159 29  | 208 36  | 82 29 |
|       | 13 140 11 | 119 52 | 166 48  | 172 19  | 241 25  | 157 39R | 209 12  | 81 11 |
|       | 23 149 48 | 126 19 | 176 11  | 179 42  | 242 01  | 152 18  | 209 55  | 81 26 |
| Sep.  | 2 159 27  | 132 42 | 180 44R | 179 19R | 242 53  | 146 36  | 210 46  | 80 54 |
|       | 12 169 09 | 139 02 | 175 26  | 170 23  | 244 01  | 143 24  | 211 43  | 80 22 |
|       | 22 178 55 | 145 19 | 166 51  | 166 58D | 245 22  | 144 04D | 212 44  | 79 51 |
| Oct.  | 2 188 43  | 151 33 | 170 58D | 177 41  | 246 55  | 148 05  | 213 51  | 79 19 |
|       | 12 198 35 | 157 44 | 185 48  | 194 23  | 248 38  | 154 32  | 215 00  | 78 47 |
|       | 22 208 31 | 163 51 | 202 59  | 211 25  | 250 31  | 162 40  | 216 11  | 78 15 |
| Nov.  | 1 218 29  | 169 54 | 219 38  | 227 41  | 252 30  | 171 59  | 217 23  | 77 43 |
|       | 11 228 31 | 175 54 | 235 33  | 243 17  | 254 36  | 182 08  | 218 35  | 77 12 |
|       | 21 238 36 | 181 48 | 250 54  | 258 15  | 256 47  | 192 52  | 219 46  | 76 40 |
| Dec.  | 1 248 41  | 187 38 | 265 46  | 272 48  | 259 00  | 204 04  | 220 55  | 76 08 |
|       | 11 258 52 | 193 21 | 279 11  | 284 13  | 261 16  | 215 36  | 221 60  | 75 36 |
|       | 21 269 03 | 198 56 | 286 36  | 284 43  | 263 32  | 227 21  | 222 60  | 75 05 |
|       | 31 279 14 | 204 24 | 278 48R | —       | 265 48  | 239 18  | 223 54  | 74 33 |

Ayanamsa : 22° 10' 28"

1983 A.D.

# RAMAN'S EPHEMERIS Longitude of the Moon

187

| 1983  | Sun. | Tues.  | Thurs. | Sat.   | Mon.   | Wed.   | Fri.   |
|-------|------|--------|--------|--------|--------|--------|--------|
| Jan.  | 1    |        |        | 129 03 | 158 29 | 181 18 | 212 27 |
|       | 9    | 237 19 | 256 22 | 308 39 | 332 29 | 356 51 | 22 06  |
|       | 23   | 48 41  | 76 54  | 106 36 | 136 00 | 166 52 |        |
| Feb.  | 1    | 181 14 | 208 32 | 234 04 | 258 20 | 281 59 | 305 35 |
|       | 13   | 392 29 | 353 55 | 19 02  | 45 01  | 72 07  | 100 32 |
|       | 27   | 160 02 |        |        |        |        | 130 06 |
| March | 1    | 189 12 | 216 43 | 242 25 | 266 45 | 290 25 | 314 05 |
|       | 13   | 338 15 | 3 10   | 28 53  | 54 21  | 82 34  | 105 38 |
|       | 27   | 168 38 | 197 15 | 224 34 |        |        |        |
| April | 1    |        |        |        |        |        | 237 38 |
|       | 3    | 262 38 | 286 38 | 310 18 | 334 19 | 359 10 | 25 04  |
|       | 17   | 79 25  | 107 24 | 135 40 | 164 03 | 192 09 | 214 27 |
| May   | 1    | 270 27 | 294 28 | 318 11 | 342 16 | 7 18   | 33 37  |
|       | 15   | 89 31  | 118 11 | 146 40 | 169 40 | 201 59 | 228 26 |
|       | 29   | 278 31 | 242 27 |        |        |        | 61 09  |
| June  | 1    |        |        |        |        | 314 19 | 338 08 |
|       | 5    | 2 38   | 28 20  | 55 34  | 84 12  | 113 37 | 142 57 |
|       | 19   | 198 53 | 225 09 | 250 26 | 274 57 | 298 56 | 322 39 |
| July  | 1    |        |        |        |        |        | 346 29 |
|       | 3    | 10 56  | 36 31  | 63 43  | 92 35  | 122 34 | 152 36 |
|       | 17   | 209 02 | 229 58 | 259 46 | 283 53 | 307 40 | 331 23 |
|       | 31   | 19 46  |        |        |        |        | 86 21  |
| Aug.  | 1    |        |        |        | 32 21  | 58 31  | 86 21  |
|       | 7    | 115 51 | 145 17 | 176 21 | 204 56 | 231 39 | 256 43 |
|       | 21   | 304 43 | 328 26 | 352 22 | 16 45  | 41 47  | 67 52  |
| Sep.  | 1    |        | 81 26  | 109 45 | 139 30 | 169 49 | 199 22 |
|       | 11   | 232 12 | 253 11 | 277 45 | 301 35 | 325 17 | 349 16 |
|       | 25   | 38 52  | 64 42  | 91 30  |        |        | 13 46  |
| Oct.  | 1    |        |        | 119 29 | 148 37 | 178 18 | 207 30 |
|       | 9    | 235 17 | 261 20 | 286 0  | 309 52 | 333 38 | 357 49 |
|       | 23   | 48 25  | 74 55  | 102 08 | 130 06 | 158 39 | 22 42  |
| Nov.  | 1    | 173 04 | 201 46 | 229 42 | 256 21 | 281 38 | 305 52 |
|       | 13   | 329 39 | 353 37 | 18 18  | 44 03  | 70 55  | 98 39  |
|       | 27   | 155 17 | 183 31 |        |        |        |        |
| Dec.  | 1    |        | 211 18 | 238 20 | 264 24 | 289 28 | 313 41 |
|       | 11   | 337 18 | 1 23   | 26 03  | 51 58  | 79 22  | 108 01 |
|       | 25   | 166 10 | 194 19 | 221 27 | 247 39 |        | 137 13 |

Ayanamsa : 22° 10' 28"

## Longitudes of Planets

| 1944  | Sun       | Mars    | Merc.   | Merc.   | Jupit.  | Venus  | Sat.    | Rahu  |
|-------|-----------|---------|---------|---------|---------|--------|---------|-------|
| Jan.  | 1 284 20  | 207 03  | 272 50  | 270 25R | 266 55  | 245 10 | 224 18  | 74 17 |
|       | 15 294 31 | 212 44  | 271 41D | 275 25D | 269 07  | 257 27 | 225 02  | 73 45 |
|       | 25 304 42 | 217 10  | 280 38  | 286 45  | 271 14  | 269 39 | 225 37  | 73 13 |
| Feb.  | 4 314 51  | 222 19  | 293 28  | 300 38  | 273 11  | 281 55 | 226 02  | 72 42 |
|       | 14 324 59 | 226 07  | 308 11  | 316 06  | 275 11  | 294 13 | 226 17  | 72 10 |
|       | 24 335 04 | 229 58  | 324 23  | 334 53  | 276 57  | 306 32 | 226 23R | 71 38 |
| March | 6 346 07  | 233 34  | 344 11  | 353 44  | 278 41  | 320 06 | 226 17  | 71 03 |
|       | 16 356 05 | 236 06  | 3 36    | 13 22   | 280 03  | 332 28 | 226 00  | 70 31 |
|       | 26 6 01   | 237 45  | 22 18   | 30 45   | 281 10  | 344 47 | 225 35  | 70 00 |
| April | 5 15 53   | 238 20R | 34 27   | 36 35   | 282 03  | 357 07 | 225 02  | 69 28 |
|       | 15 25 42  | 237 43  | 36 01R  | 33 23R  | 282 38  | 9 26   | 224 23  | 68 56 |
|       | 25 35 27  | 235 51  | 29 59   | 27 19   | 282 56R | 21 45  | 223 40  | 68 24 |
| May   | 5 45 10   | 232 53  | 26 11   | 27 15D  | 282 54  | 34 04  | 222 55  | 67 53 |
|       | 15 54 50  | 229 21  | 29 59D  | 34 17   | 282 34  | 46 21  | 222 10  | 67 21 |
|       | 25 64 27  | 225 55  | 39 53   | 46 39   | 281 56  | 58 38  | 221 28  | 66 49 |
| June  | 4 74 02   | 223 17  | 54 31   | 63 25   | 281 03  | 70 56  | 220 51  | 66 17 |
|       | 14 83 36  | 221 53  | 73 18   | 83 56   | 279 57  | 83 12  | 220 21  | 65 45 |
|       | 24 93 08  | 221 51D | 84 52   | 105 34  | 278 44  | 95 30  | 219 59  | 65 14 |
| July  | 4 102 40  | 223 06  | 115 39  | 129 56  | 277 27  | 107 47 | 219 45  | 64 42 |
|       | 14 112 12 | 225 30  | 133 24  | 141 02  | 276 13  | 120 05 | 219 42D | 64 10 |
|       | 24 121 45 | 228 51  | 147 48  | 153 38  | 275 06  | 132 23 | 219 48  | 63 38 |
| Aug.  | 3 131 19  | 232 59  | 158 21  | 161 42  | 274 12  | 144 41 | 220 04  | 63 07 |
|       | 13 140 54 | 237 46  | 163 18R | 162 45R | 273 33  | 156 60 | 220 29  | 62 35 |
|       | 23 150 31 | 243 04  | 159 55  | 155 32  | 273 11  | 169 18 | 221 03  | 62 03 |
| Sep.  | 2 160 11  | 248 10  | 151 32  | 150 03D | 273 08D | 181 35 | 221 45  | 61 31 |
|       | 12 169 53 | 254 58  | 152 09D | 157 34  | 273 25  | 193 52 | 222 34  | 60 60 |
|       | 22 179 39 | 261 24  | 165 14  | 174 00  | 273 59  | 206 07 | 223 29  | 60 28 |
| Oct.  | 2 189 28  | 268 07  | 183 02  | 191 58  | 274 51  | 218 22 | 224 30  | 59 56 |
|       | 12 199 20 | 275 03  | 200 37  | 208 59  | 275 59  | 230 34 | 225 35  | 59 24 |
|       | 22 209 16 | 282 09  | 217 04  | 224 55  | 277 20  | 242 45 | 226 44  | 58 52 |
| Nov.  | 1 219 15  | 289 26  | 232 33  | 239 60  | 278 55  | 249 54 | 227 54  | 58 21 |
|       | 11 229 17 | 296 49  | 247 13  | 254 08  | 280 41  | 266 60 | 229 06  | 57 49 |
|       | 21 239 22 | 304 11  | 260 34  | 266 06  | 282 36  | 279 01 | 230 17  | 57 17 |
| Dec.  | 1 249 29  | 311 52  | 269 53  | 270 33R | 284 39  | 290 58 | 231 28  | 56 45 |
|       | 11 259 38 | 319 29  | 266 50R | 260 18  | 286 48  | 302 46 | 232 36  | 56 14 |
|       | 21 269 49 | 327 07  | 255 21  | 254 46D | 289 03  | 314 24 | 233 41  | 55 42 |
|       | 31 280 00 | 334 46  | 257 34D | —       | 291 21  | 325 47 | 234 41  | 55 10 |

Ayanamsha : 22° 11' 18"

1984 A.D.

## RAMAN'S EPHEMERIS

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## Longitude of the Moon

| 1984  | Sun.                               | Tues.                      | Thurs.                     | Sat.                       | Mon.                      | Wed.                       | Fri.                      |
|-------|------------------------------------|----------------------------|----------------------------|----------------------------|---------------------------|----------------------------|---------------------------|
| Jan.  | 1 260 26<br>15 73 12<br>29 269 51  | 285 26<br>101 37<br>294 20 | 309 47<br>131 23           | 333 39<br>161 28           | 357 23<br>190 40          | 21 30<br>218 24            | 46 34<br>244 40           |
| Feb.  | 1<br>5 354 02<br>19 185 10         | 17 52<br>214 12            | 42 17<br>241 23            | 67 10<br>266 56            | 95 07<br>291 26           | 306 24<br>124 18<br>315 23 | 330 18<br>154 46          |
| March | 1<br>11 90 09<br>25 288 16         | 118 02<br>312 22           | 327 16<br>147 38<br>336 06 | 351 01<br>178 09<br>359 53 | 14 52<br>208 13           | 39 04<br>236 41            | 63 59<br>263 15           |
| April | 1 11 52<br>15 201 30<br>29 20 34   | 36 10<br>230 41            | 61 01<br>258 18            | 86 44<br>284 14            | 113 39<br>308 50          | 142 00<br>332 44           | 171 34<br>356 30          |
| May   | 1<br>13 210 21<br>27 28 52         | 45 15<br>238 53<br>53 56   | 70 42<br>266 14<br>80 01   | 96 59<br>292 09            | 124 13<br>316 52          | 152 22<br>340 50           | 181 16<br>4 39            |
| June  | 1<br>3 120 59<br>17 312 34         | 149 08<br>336 50           | 177 35<br>0 39             | 205 58<br>24 37            | 233 58<br>49 21           | 261 12<br>75 18            | 93 27<br>287 25<br>102 38 |
| July  | 1 131 04<br>15 320 46<br>29 140 25 | 159 57<br>344 54<br>170 07 | 188 36<br>8 40             | 216 37<br>32 35            | 243 51<br>57 18           | 270 18<br>83 24            | 295 56<br>111 12          |
| Aug.  | 1<br>5 240 48<br>19 53 03          | 267 04<br>78 18            | 292 28<br>105 15           | 317 12<br>134 04           | 341 23<br>164 12          | 184 48<br>5 11<br>194 23   | 213 25<br>28 54<br>223 27 |
| Sep.  | 1<br>9 338 16<br>23 157 21         | 2 04<br>187 50             | 25 22<br>217 57            | 237 22<br>49 40<br>246 37  | 264 04<br>74 16           | 289 32<br>100 09           | 314 09<br>127 51          |
| Oct.  | 1<br>7 347 12<br>21 165 58         | 10 56<br>196 02            | 34 44<br>226 04            | 58 52<br>254 57            | 273 30<br>83 40<br>282 07 | 298 54<br>109 34<br>307 40 | 323 19<br>136 58          |
| Nov.  | 1<br>11 80 44<br>25 276 38         | 106 28<br>303 07           | 319 58<br>133 14<br>328 09 | 344 00<br>161 08           | 7 43<br>190 03            | 31 33<br>219 30            | 55 49<br>248 38           |
| Dec.  | 1<br>9 90 03<br>23 284 32          | 116 33<br>310 53           | 143 53<br>335 57           | 352 13<br>171 50<br>0 04   | 15 56<br>200 12<br>23 46  | 39 52<br>228 44            | 64 30<br>257 01           |

Ayanamsa : 22° 11' 18"

# RAMAN'S EPHEMERIS Longitudes of Planets

1985 A.D.

| 1985  | Sun       | Mars   | Merc.   | Merc.   | Jupit.  | Venus  | Sat.    | Rahu  |
|-------|-----------|--------|---------|---------|---------|--------|---------|-------|
| Jan.  | 5 285 06  | 338 35 | 262 24  | 268 22  | 292 30  | 331 22 | 235 09  | 54 54 |
|       | 15 295 17 | 346 12 | 275 01  | 282 05  | 294 51  | 342 11 | 236 00  | 54 22 |
|       | 25 305 28 | 353 47 | 289 28  | 297 08  | 297 11  | 352 28 | 236 43  | 53 51 |
| Feb.  | 4 315 37  | 1 20   | 305 06  | 313 22  | 299 30  | 1 57   | 237 19  | 53 19 |
|       | 14 325 45 | 8 50   | 321 59  | 330 57  | 301 47  | 10 18  | 237 45  | 52 47 |
|       | 24 335 50 | 16 16  | 340 15  | 349 45  | 304 00  | 16 60  | 238 01  | 52 15 |
| March | 6 345 52  | 23 38  | 359 05  | 7 33    | 306 07  | 21 16  | 238 07  | 51 44 |
|       | 16 355 21 | 30 56  | 14 09   | 17 56   | 308 07  | 22 00R | 238 03R | 51 12 |
|       | 26 5 47   | 38 10  | 11 27R  | 16 05R  | 309 59  | 19 01  | 237 49  | 50 40 |
| April | 5 15 39   | 45 19  | 12 12   | 8 40    | 311 41  | 13 05  | 237 26  | 50 08 |
|       | 15 25 28  | 52 23  | 6 51    | 7 11D   | 313 12  | 7 49   | 236 55  | 49 36 |
|       | 25 35 13  | 59 23  | 9 28D   | 13 22   | 314 29  | 6 00D  | 236 17  | 49 05 |
| May   | 5 44 56   | 66 19  | 18 35   | 24 53   | 315 32  | 8 00   | 235 35  | 48 33 |
|       | 15 54 35  | 73 10  | 32 09   | 40 20   | 316 18  | 12 58  | 234 50  | 48 01 |
|       | 25 64 13  | 79 58  | 49 24   | 59 21   | 316 47  | 19 57  | 234 06  | 47 29 |
| June  | 4 73 48   | 86 42  | 07 59   | 80 58   | 316 57  | 28 19  | 233 23  | 46 58 |
|       | 14 83 22  | 93 22  | 91 45   | 101 53  | 316 49R | 37 38  | 232 45  | 46 26 |
|       | 24 92 55  | 99 59  | 111 10  | 119 30  | 316 21  | 47 36  | 232 14  | 45 54 |
| July  | 4 102 27  | 106 34 | 126 53  | 133 15  | 315 36  | 58 02  | 231 49  | 45 22 |
|       | 14 111 59 | 113 05 | 138 30  | 142 27  | 314 36  | 68 51  | 231 34  | 44 51 |
|       | 24 121 32 | 119 34 | 144 47  | 145 13R | 313 26  | 79 57  | 231 28  | 44 19 |
| Aug.  | 3 131 05  | 126 01 | 143 32R | 140 00  | 312 09  | 91 17  | 231 31D | 43 47 |
|       | 13 140 40 | 132 26 | 136 13  | 133 35  | 310 52  | 102 48 | 231 45  | 43 15 |
|       | 23 150 18 | 138 50 | 133 38D | 136 53D | 309 39  | 114 30 | 232 07  | 42 43 |
| Sep.  | 2 159 57  | 145 12 | 143 01  | 151 12  | 308 37  | 126 22 | 232 39  | 42 12 |
|       | 12 169 40 | 151 33 | 160 26  | 169 53  | 307 49  | 138 21 | 233 19  | 41 40 |
|       | 22 179 25 | 157 53 | 179 09  | 188 05  | 307 18  | 149 58 | 234 06  | 41 08 |
| Oct.  | 2 189 14  | 164 12 | 196 37  | 204 48  | 307 07  | 162 41 | 235 00  | 40 36 |
|       | 12 196 06 | 170 30 | 212 40  | 220 14  | 307 15D | 175 00 | 235 59  | 40 05 |
|       | 22 209 02 | 176 47 | 227 31  | 234 29  | 307 43  | 187 24 | 237 03  | 39 33 |
| Nov.  | 1 219 00  | 183 03 | 241 01  | 246 55  | 306 29  | 199 51 | 238 11  | 39 01 |
|       | 11 229 02 | 189 19 | 251 44  | 254 38  | 309 33  | 212 21 | 239 20  | 38 29 |
|       | 21 239 07 | 195 33 | 254 19R | 249 50R | 310 52  | 224 53 | 240 32  | 37 58 |
| Dec.  | 1 249 14  | 201 46 | 243 13  | 239 08  | 312 25  | 237 26 | 241 43  | 37 26 |
|       | 11 259 23 | 207 58 | 239 31D | 243 11D | 314 10  | 250 01 | 242 53  | 36 54 |
|       | 21 269 34 | 214 08 | 248 42  | 255 11  | 316 05  | 262 36 | 244 02  | 36 22 |
|       | 31 279 45 | 220 16 | 262 10  | —       | 318 09  | 275 11 | 245 06  | 35 50 |

Ayanamsa : 22° 12' 09"

| 1985  | Sun. | Tues.  | Thurs. | Sat.   | Mon.   | Wed.   | Fri.   |
|-------|------|--------|--------|--------|--------|--------|--------|
| Jan.  | 1    | 35 40  | 60 01  | 85 30  | 112 17 | 140 10 | 168 35 |
|       | 13   | 196 59 | 225 03 | 252 41 | 279 47 | 306 07 | 331 30 |
|       | 27   | 19 43  | 43 24  | 67 44  |        |        |        |
| Feb.  | 1    |        |        |        |        |        | 80 20  |
|       | 3    | 105 16 | 134 49 | 163 57 | 193 15 | 221 53 | 249 34 |
|       | 17   | 302 19 | 327 34 | 352 05 | 15 59  | 39 35  | 63 26  |
| March | 1    |        |        |        |        |        | 88 14  |
|       | 3    | 114 37 | 142 53 | 172 35 | 202 39 | 231 57 | 259 53 |
|       | 17   | 311 58 | 336 41 | 0 48   | 24 32  | 48 07  | 72 00  |
|       | 31   | 122 56 |        |        |        |        | 96 44  |
| April | 1    |        |        |        | 136 44 | 165 41 | 195 54 |
|       | 7    | 226 12 | 255 24 | 282 58 | 308 58 | 333 46 | 357 50 |
|       | 21   | 45 09  | 68 59  | 93 24  | 118 51 | 145 45 | 21 32  |
| May   | 1    |        |        |        |        | 174 17 | 204 08 |
|       | 5    | 234 23 | 263 52 | 291 47 | 317 58 | 342 45 | 6 41   |
|       | 19   | 54 00  | 78 10  | 103 01 | 128 47 | 155 40 | 183 48 |
| June  | 1    |        |        | 227 51 | 257 29 | 286 12 | 313 23 |
|       | 9    | 338 56 | 3 15   | 26 57  | 50 38  | 74 50  | 99 50  |
|       | 23   | 152 32 | 180 08 | 208 26 | 237 16 |        | 125 45 |
| July  | 1    |        |        |        | 266 10 | 294 26 | 321 27 |
|       | 7    | 346 59 | 11 20  | 35 02  | 58 49  | 83 16  | 108 48 |
|       | 21   | 163 00 | 191 02 | 219 15 | 247 31 | 275 35 | 303 07 |
| Aug.  | 1    |        | 316 31 | 342 28 | 7 13   | 31 07  | 54 47  |
|       | 11   | 78 55  | 104 08 | 130 47 | 158 42 | 187 20 | 216 01 |
|       | 21   | 272 01 | 299 07 | 325 26 | 350 50 |        | 244 18 |
| Sep.  | 1    | 3 11   | 27 16  | 50 55  | 74 42  | 99 19  | 125 21 |
|       | 15   | 182 07 | 211 38 | 240 45 | 268 54 | 295 59 | 322 05 |
|       | 29   | 11 45  |        |        |        |        | 153 04 |
| Oct.  | 1    |        | 35 37  | 59 12  | 82 58  | 107 31 | 133 27 |
|       | 13   | 190 25 | 220 33 | 250 21 | 278 58 | 306 04 | 331 49 |
|       | 27   | 20 35  | 44 16  | 67 53  |        |        | 161 07 |
| Nov.  | 1    |        |        |        |        |        | 356 32 |
|       | 3    | 103 56 | 129 01 | 155 32 | 183 44 | 213 28 | 243 51 |
|       | 17   | 301 58 | 328 30 | 353 31 | 17 35  | 41 14  | 64 52  |
| Dec.  | 1    | 113 16 | 138 31 | 164 52 | 192 36 | 221 45 | 251 48 |
|       | 15   | 310 19 | 337 05 | 2 11   | 26 12  | 49 47  | 73 31  |
|       | 29   | 122 47 | 148 32 |        |        |        | 97 48  |

Ayanamasa : 22° 12' 09"



# RAMAN'S EPHEMERIS Longitudes of Planets

1986 A.D.

| 1986  |    | Sun    | Mars    | Merc.   | Merc.   | Jupit.  | Venus   | Saturn  | Rahu  |
|-------|----|--------|---------|---------|---------|---------|---------|---------|-------|
| Jan.  | 5  | 285 00 | 223 19  | 269 28  | 276 59  | 319 14  | 281 28  | 245 37  | 35 35 |
|       | 15 | 295 03 | 229 23  | 284 43  | 292 38  | 321 27  | 294 03  | 246 35  | 35 03 |
|       | 25 | 305 13 | 235 23  | 300 48  | 309 13  | 323 46  | 306 37  | 247 27  | 34 31 |
| Feb.  | 4  | 315 22 | 241 19  | 317 55  | 326 53  | 326 08  | 319 11  | 248 12  | 33 59 |
|       | 14 | 325 30 | 247 10  | 335 58  | 344 51  | 328 31  | 331 43  | 248 48  | 33 27 |
|       | 24 | 335 35 | 252 54  | 352 46  | 358 37  | 330 55  | 344 14  | 249 16  | 32 56 |
| March | 6  | 345 37 | 258 30  | 1 13R   | 0 07    | 333 19  | 356 42  | 249 34  | 32 24 |
|       | 16 | 355 36 | 263 56  | 356 12  | 351 41  | 335 40  | 9 09    | 249 41  | 31 52 |
|       | 26 | 5 32   | 269 09  | 348 39  | 348 00D | 337 58  | 21 33   | 249 39R | 31 20 |
| April | 5  | 15 24  | 274 07  | 349 35  | 352 58  | 340 11  | 33 54   | 249 27  | 30 49 |
|       | 15 | 25 13  | 278 46  | 357 45  | 3 37    | 342 19  | 46 11   | 249 06  | 30 17 |
|       | 25 | 34 59  | 282 59  | 10 25   | 18 01   | 344 19  | 58 25   | 248 37  | 29 45 |
| May   | 5  | 44 42  | 286 44  | 26 24   | 35 33   | 346 10  | 70 35   | 248 00  | 29 13 |
|       | 15 | 54 22  | 289 41  | 45 29   | 56 04   | 347 51  | 82 41   | 247 19  | 28 42 |
|       | 25 | 63 59  | 291 51  | 67 00   | 77 47   | 349 20  | 94 43   | 246 35  | 28 10 |
| June  | 4  | 73 34  | 292 29  | 87 55   | 97 05   | 350 35  | 106 39  | 245 51  | 27 38 |
|       | 14 | 83 08  | 292 55R | 105 12  | 112 10  | 351 36  | 118 29  | 245 08  | 27 06 |
|       | 24 | 92 41  | 291 37  | 117 57  | 122 24  | 352 19  | 130 12  | 244 29  | 26 34 |
| July  | 4  | 102 13 | 289 18  | 125 18  | 126 24  | 352 44  | 141 47  | 243 56  | 26 03 |
|       | 14 | 111 45 | 286 26  | 125 34R | 123 00  | 352 51R | 153 12  | 243 30  | 25 31 |
|       | 24 | 121 18 | 283 46  | 119 35  | 116 44  | 352 38  | 164 24  | 243 12  | 24 59 |
| Aug.  | 3  | 130 51 | 281 57  | 115 45D | 117 22  | 352 05  | 175 20  | 243 04  | 24 27 |
|       | 13 | 140 27 | 281 25D | 121 42  | 128 31  | 351 16  | 185 55  | 243 05D | 23 56 |
|       | 23 | 150 04 | 282 16  | 137 09  | 146 46  | 350 12  | 196 04  | 243 16  | 23 24 |
| Sep.  | 2  | 159 43 | 284 23  | 156 37  | 166 13  | 348 57  | 205 36  | 243 37  | 22 52 |
|       | 12 | 169 26 | 287 36  | 175 24  | 184 08  | 347 38  | 214 16  | 244 07  | 22 20 |
|       | 22 | 179 11 | 291 43  | 192 25  | 200 18  | 346 20  | 221 42  | 244 44  | 21 49 |
| Oct.  | 1  | 189 00 | 296 32  | 207 48  | 214 55  | 345 09  | 227 17  | 245 30  | 21 17 |
|       | 12 | 198 52 | 301 55  | 221 37  | 227 45  | 344 10  | 230 11  | 246 22  | 20 45 |
|       | 22 | 208 47 | 307 44  | 233 05  | 237 09  | 343 27  | 229 27R | 247 20  | 20 13 |
| Nov.  | 1  | 218 46 | 313 53  | 239 06  | 237 47R | 343 03  | 225 02  | 248 23  | 19 41 |
|       | 11 | 228 48 | 320 18  | 232 42  | 226 22  | 342 59D | 219 08  | 249 30  | 19 10 |
|       | 21 | 238 52 | 326 54  | 223 10  | 224 30D | 343 15  | 215 20  | 250 39  | 18 38 |
| Dec.  | 1  | 248 59 | 333 39  | 228 59  | 235 09  | 343 52  | 215 28D | 251 50  | 18 06 |
|       | 11 | 259 09 | 340 31  | 242 07  | 249 27  | 344 47  | 219 11  | 253 01  | 17 34 |
|       | 21 | 269 19 | 347 26  | 256 59  | 264 38  | 345 59  | 225 31  | 254 11  | 17 03 |
|       | 31 | 279 31 | 354 24  | 272 24  | —       | 347 26  | 233 39  | 255 20  | 16 31 |

Ayanamsa : 22° 12' 59"

## Longitude of the Moon

|       | 1986 | Sun.   | Tues.  | Thurs. | Sat.   | Mon.   | Wed.   | Fri.   |
|-------|------|--------|--------|--------|--------|--------|--------|--------|
| Jan.  | 1    |        |        |        |        |        | 161 42 | 188 42 |
|       | 5    | 216 41 | 245 38 | 275 04 | 304 06 | 331 49 | 357 49 | 22 23  |
|       | 19   | 46 08  | 69 47  | 93 59  | 119 04 | 145 07 | 171 58 | 199 24 |
| Feb.  | 1    |        |        |        | 213 18 | 241 28 | 269 58 | 298 27 |
|       | 9    | 326 15 | 352 49 | 17 59  | 42 06  | 65 46  | 89 41  | 114 29 |
|       | 23   | 140 31 | 167 45 | 195 46 |        |        |        |        |
| March | 1    |        |        |        | 224 07 | 252 26 | 280 30 | 308 08 |
|       | 9    | 335 03 | 0 59   | 25 52  | 48 55  | 73 36  | 97 31  | 122 20 |
|       | 23   | 148 32 | 176 15 | 205 04 | 234 18 | 263 12 |        |        |
| April | 1    |        | 277 21 | 304 57 | 331 34 | 357 14 | 22 03  | 46 12  |
|       | 13   | 69 55  | 93 38  | 117 53 | 143 15 | 170 11 | 198 47 | 228 33 |
|       | 27   | 258 29 | 287 35 |        |        |        |        |        |
| May   | 1    |        |        | 315 17 | 341 33 | 6 40   | 30 59  | 54 50  |
|       | 11   | 78 30  | 102 16 | 126 32 | 151 47 | 178 30 | 206 57 | 236 52 |
|       | 25   | 267 17 | 296 56 | 324 56 | 351 10 |        |        |        |
| June  | 1    | 3 44   | 28 06  | 51 53  | 75 32  | 99 19  | 123 28 | 148 17 |
|       | 15   | 174 08 | 201 25 | 230 19 | 260 28 | 290 45 | 319 55 | 347 13 |
|       | 29   | 12 43  |        |        |        |        |        |        |
| July  | 1    |        | 37 00  | 60 42  | 84 23  | 108 22 | 132 53 | 158 03 |
|       | 13   | 184 04 | 211 12 | 239 40 | 269 16 | 299 10 | 328 11 | 355 32 |
|       | 27   | 21 08  | 45 28  | 69 11  |        |        |        |        |
| Aug.  | 1    |        |        |        |        |        |        | 81 02  |
|       | 3    | 105 01 | 129 37 | 154 58 | 181 04 | 207 58 | 235 43 | 264 20 |
|       | 17   | 293 28 | 322 21 | 350 11 | 16 31  | 41 25  | 65 26  | 89 10  |
|       | 31   | 113 17 |        |        |        |        |        |        |
| Sep.  | 1    |        |        |        |        | 125 38 | 151 03 | 177 27 |
|       | 7    | 204 42 | 232 34 | 260 50 | 289 16 | 317 31 | 345 07 | 11 40  |
|       | 21   | 37 00  | 61 21  | 85 10  | 109 03 | 133 36 |        |        |
| Oct.  | 1    |        |        |        |        |        | 159 18 | 186 18 |
|       | 5    | 214 24 | 243 07 | 271 50 | 300 07 | 327 40 | 354 23 | 20 12  |
|       | 19   | 45 09  | 69 21  | 93 08  | 116 59 | 141 27 | 167 08 | 194 24 |
| Nov.  | 1    |        |        |        | 208 38 | 237 57 | 267 37 | 296 42 |
|       | 9    | 324 35 | 351 12 | 16 46  | 41 33  | 65 46  | 89 36  | 113 20 |
|       | 23   | 137 21 | 162 11 | 188 26 | 216 30 |        |        |        |
| Dec.  | 1    |        |        |        |        | 246 13 | 276 38 | 306 25 |
|       | 7    | 334 37 | 1 07   | 26 17  | 50 38  | 74 33  | 98 19  | 122 07 |
|       | 21   | 146 12 | 170 57 | 196 56 | 224 39 | 254 11 | 284 46 |        |

Ayanamsa : 22° 12' 59"

# RAMAN'S EPHEMERIS Longitudes of Planets

1987 A.D.

| 1987  | Sun       | Mars   | Merc.   | Merc.   | Jupit. | Venus  | Sat.    | Rahu   |
|-------|-----------|--------|---------|---------|--------|--------|---------|--------|
| Jan.  | 5 284 36  | 357 54 | 280 18  | 288 25  | 348 14 | 238 11 | 255 53  | 16 15  |
|       | 15 294 48 | 4 53   | 296 35  | 305 01  | 350 01 | 247 56 | 256 56  | 15 43  |
|       | 25 304 58 | 11 52  | 313 37  | 322 16  | 351 57 | 258 23 | 257 54  | 15 11  |
| Feb.  | ■ 315 08  | 18 50  | 330 08  | 337 58  | 354 02 | 269 18 | 258 47  | 14 40  |
|       | 14 325 15 | 25 47  | 343 01  | 344 25R | 356 14 | 280 33 | 259 33  | 14 08  |
|       | 24 335 20 | 32 43  | 341 46  | 336 43  | 358 32 | 292 03 | 260 10  | 13 36  |
| March | 6 345 23  | 39 33  | 332 11  | 330 03  | 0 53   | 303 43 | 260 39  | 13 04  |
|       | 16 355 22 | 46 22  | 330 35D | 333 16  | 3 17   | 315 30 | 260 59  | 12 33  |
|       | 26 5 18   | 53 09  | 337 31  | 342 57  | 5 42   | 327 24 | 261 08  | 12 01  |
| April | 5 15 10   | 59 52  | 349 18  | 356 25  | 8 07   | 339 22 | 261 08R | 11 29  |
|       | 15 24 59  | 66 33  | 4 14    | 12 43   | 10 31  | 351 22 | 260 58  | 10 57  |
|       | 25 34 45  | 73 11  | 21 53   | 31 44   | 12 52  | 3 25   | 260 38  | 10 25  |
| May   | ■ 44 28   | 79 47  | 42 11   | 53 01   | 15 10  | 15 29  | 260 11  | 9 54   |
|       | 15 54 08  | 86 20  | 63 43   | 73 45   | 17 23  | 27 35  | 259 36  | 9 22   |
|       | 25 63 46  | 92 51  | 82 43   | 89 57   | 19 29  | 39 42  | 258 56  | 8 50   |
| June  | 4 73 21   | 99 20  | 96 50   | 101 47  | 21 28  | 51 51  | 258 13  | 8 18   |
|       | 14 82 55  | 105 46 | 105 08  | 106 42R | 23 18  | 64 00  | 257 28  | 7 47   |
|       | 24 92 27  | 112 12 | 106 23  | 104 24  | 24 58  | 76 11  | 256 45  | 7 15   |
| July  | ■ 102 00  | 118 36 | 101 28  | 98 46   | 26 25  | 88 23  | 256 05  | 6 43   |
|       | 14 111 32 | 124 59 | 97 26D  | 98 12   | 27 38  | 100 37 | 255 31  | 6 11   |
|       | 24 121 04 | 131 21 | 101 17  | 106 38  | 28 36  | 112 54 | 255 03  | 5 40   |
| Aug.  | ■ 130 38  | 137 43 | 114 02  | 123 03  | 29 17  | 125 12 | 254 44  | 5 08   |
|       | 13 140 13 | 144 04 | 133 01  | 143 13  | 29 39  | 137 32 | 254 33  | 4 36   |
|       | 23 149 50 | 150 26 | 153 08  | 162 35  | 29 42R | 149 54 | 254 32D | 4 04   |
| Sep.  | 2 159 29  | 156 48 | 171 29  | 179 53  | 29 25  | 162 18 | 254 41  | 3 32   |
|       | 12 169 12 | 163 10 | 187 46  | 195 12  | 28 48  | 174 43 | 255 00  | 3 01   |
|       | 22 178 57 | 169 33 | 202 08  | 208 32  | 27 54  | 187 09 | 255 28  | 2 29   |
| Oct.  | 2 188 46  | 175 57 | 214 14  | 218 57  | 26 47  | 199 35 | 256 04  | 1 57   |
|       | 12 198 37 | 182 22 | 222 11  | 223 09R | 25 29  | 212 02 | 256 48  | 1 25   |
|       | 22 208 33 | 188 49 | 220 52  | 215 24  | 24 08  | 224 29 | 257 39  | 0 54   |
| Nov.  | ■ 218 31  | 195 17 | 209 37  | 207 25D | 22 50  | 236 56 | 258 36  | 0 22   |
|       | 11 228 33 | 201 46 | 209 40  | 214 55  | 21 40  | 249 23 | 259 38  | 359 50 |
|       | ■ 238 38  | 208 17 | 221 41  | 229 07  | 20 44  | 261 50 | 260 44  | 359 18 |
| Dec.  | ■ 248 45  | 214 49 | 236 48  | 244 34  | 20 06  | 274 15 | 261 53  | 358 47 |
|       | 11 258 54 | 221 23 | 252 22  | 255 11  | 19 47  | 286 40 | 263 03  | 358 15 |
|       | 21 269 05 | 227 59 | 268 03  | 276 00  | 19 49D | 299 03 | 264 14  | 357 43 |
|       | 31 279 16 | 234 36 | 284 03  | —       | 20 12  | 311 24 | 265 24  | 357 11 |

Ayanamsa : 22° 13' 49"

| 1987  | Sun. | Tues.  | Thurs  | Sat.   | Mon.   | Wed.   | Fri.   |
|-------|------|--------|--------|--------|--------|--------|--------|
| Jan.  | 1    |        | 300 01 | 329 34 | 357 15 | 23 05  | 47 39  |
|       | 11   | 71 33  | 95 17  | 119 07 | 143 16 | 167 53 | 193 17 |
|       | 25   | 248 04 | 277 43 | 307 59 | 337 34 |        |        |
| Feb.  | 1    | 351 46 | 18 45  | 44 03  | 68 16  | 92 00  | 115 49 |
|       | 15   | 164 50 | 190 20 | 216 39 | 243 60 | 272 27 | 301 45 |
|       |      |        |        |        |        |        | 331 06 |
| March | 1    | 359 35 | 25 34  | 52 02  | 76 22  | 100 10 | 124 04 |
|       | 15   | 173 47 | 199 59 | 227 03 | 254 50 | 283 09 | 311 43 |
|       | 29   | 7 49   | 34 25  |        |        |        |        |
| April | 1    |        |        |        |        | 47 16  | 72 07  |
|       | 5    | 95 10  | 119 58 | 144 08 | 169 11 | 195 27 | 222 56 |
|       | 19   | 279 55 | 308 22 | 336 17 | 3 30   | 29 54  | 55 25  |
|       |      |        |        |        |        |        |        |
| May   | 1    |        |        |        |        |        | 80 05  |
|       | 3    | 109 06 | 127 52 | 151 60 | 177 05 | 203 38 | 231 45 |
|       | 17   | 290 26 | 319 12 | 346 53 | 13 28  | 39 10  | 64 07  |
|       | 31   | 112 22 |        |        |        |        |        |
| June  | 1    |        |        |        |        | 124 13 | 148 02 |
|       | 7    | 198 12 | 225 41 | 254 54 | 285 04 | 314 55 | 343 29 |
|       | 21   | 36 13  | 61 02  | 85 17  | 109 11 | 132 53 |        |
|       |      |        |        |        |        |        | 172 29 |
|       |      |        |        |        |        |        | 10 29  |
| July  | 1    |        |        |        |        | 156 42 | 181 06 |
|       | 5    | 206 42 | 234 03 | 263 17 | 293 43 | 324 01 | 352 58 |
|       | 19   | 45 46  | 70 21  | 94 21  | 118 06 | 141 50 | 165 48 |
| Aug.  | 1    |        |        |        | 202 58 | 229 17 | 262 19 |
|       | 9    | 317 22 | 347 13 | 15 33  | 42 05  | 67 09  | 91 19  |
|       | 23   | 138 50 | 162 53 | 187 27 | 212 48 | 239 14 |        |
|       |      |        |        |        |        |        | 115 04 |
| Sep.  | 1    |        | 252 57 | 281 25 | 310 56 | 340 43 | 9 44   |
|       | 13   | 63 09  | 87 46  | 111 40 | 135 25 | 159 29 | 184 12 |
|       | 27   | 236 11 | 263 32 |        |        |        |        |
| Oct.  | 1    |        |        | 291 44 | 320 32 | 349 28 | 17 52  |
|       | 11   | 71 05  | 95 47  | 119 42 | 143 28 | 167 41 | 192 49 |
|       | 25   | 246 22 | 274 22 | 302 40 | 330 58 |        |        |
|       |      |        |        |        |        |        | 45 10  |
|       |      |        |        |        |        |        | 219 04 |
| Nov.  | 1    | 345 02 | 12 05  | 40 02  | 66 16  | 91 25  | 115 38 |
|       | 15   | 163 15 | 187 59 | 214 03 | 241 37 | 270 17 | 299 15 |
|       | 29   | 355 38 |        |        |        |        |        |
| Dec.  | 1    |        | 22 42  | 49 04  | 74 42  | 99 31  | 123 37 |
|       | 13   | 171 05 | 195 44 | 221 52 | 249 49 | 279 14 | 309 04 |
|       | 27   | 6 11   | 32 54  | 58 39  |        |        |        |
|       |      |        |        |        |        |        | 147 17 |
|       |      |        |        |        |        |        | 338 14 |

Avanamsa : 22° 13' 49"

# RAMAN'S EPHEMERIS

## Longitudes of Planets

1988 A.D.

| 1988  | Sun       | Mars    | Merc.   | Merc.   | Jupit. | Venus  | Saturn  | Rahu   |
|-------|-----------|---------|---------|---------|--------|--------|---------|--------|
| Jan.  | 5 284 22  | 237 55  | 292 12  | 300 27  | 20 31  | 317 33 | 265 29  | 356 55 |
|       | 15 294 33 | 244 34  | 308 39  | 316 28  | 21 23  | 329 48 | 267 06  | 356 24 |
|       | 25 304 44 | 251 15  | 323 08  | 327 21  | 22 32  | 341 57 | 268 10  | 355 52 |
| Feb.  | 4 314 53  | 257 57  | 327 34R | 323 34  | 23 56  | 353 59 | 269 09  | 355 20 |
|       | 14 325 00 | 264 40  | 317 50  | 313 46  | 25 34  | 5 52   | 270 02  | 354 48 |
|       | 24 335 06 | 271 24  | 312 43D | 314 57  | 27 23  | 17 32  | 270 49  | 354 17 |
| March | 6 346 08  | 278 49  | 318 51  | 324 04  | 29 33  | 30 05  | 271 31  | 353 42 |
|       | 16 356 07 | 285 34  | 330 06  | 336 56  | 31 40  | 41 07  | 272 01  | 353 10 |
|       | 26 6 03   | 292 19  | 344 23  | 352 25  | 33 53  | 51 43  | 272 21  | 352 38 |
| April | 5 15 55   | 299 03  | 1 02    | 10 16   | 36 11  | 61 44  | 272 31  | 352 06 |
|       | 15 25 44  | 305 46  | 20 06   | 30 29   | 38 31  | 70 56  | 272 32R | 351 34 |
|       | 25 35 30  | 312 27  | 41 08   | 51 41   | 40 54  | 79 01  | 272 23  | 351 03 |
| May   | 5 45 12   | 319 04  | 61 15   | 69 38   | 43 17  | 85 27  | 272 04  | 350 31 |
|       | 15 54 52  | 325 36  | 76 30   | 81 43   | 45 40  | 89 31  | 271 37  | 349 59 |
|       | 25 64 29  | 332 01  | 85 09   | 86 41R  | 48 01  | 90 16R | 271 03  | 349 27 |
| June  | 4 74 04   | 338 17  | 86 18   | 84 21   | 50 19  | 87 08  | 270 24  | 348 56 |
|       | 14 83 38  | 344 19  | 81 36   | 79 13   | 52 34  | 81 16  | 269 41  | 348 24 |
|       | 24 93 11  | 350 04  | 78 10D  | 78 59   | 54 43  | 75 56  | 268 57  | 347 52 |
| July  | 4 102 43  | 355 26  | 81 48   | 86 34   | 56 45  | 73 55D | 268 13  | 347 20 |
|       | 14 112 15 | 0 18    | 93 09   | 101 23  | 58 40  | 75 42  | 267 33  | 346 49 |
|       | 24 121 48 | 4 31    | 110 57  | 121 18  | 60 25  | 80 26  | 266 58  | 346 17 |
| Aug.  | 3 131 21  | 7 55    | 131 45  | 141 53  | 61 60  | 87 16  | 266 29  | 345 45 |
|       | 13 140 57 | 10 17   | 151 26  | 160 24  | 63 21  | 95 32  | 266 09  | 345 13 |
|       | 23 150 34 | 11 23   | 168 45  | 176 32  | 64 29  | 104 48 | 265 58  | 344 42 |
| Sep.  | 2 160 13  | 11 07R  | 183 45  | 190 21  | 65 20  | 114 48 | 265 56D | 344 10 |
|       | 12 169 56 | 9 30    | 196 16  | 201 16  | 65 53  | 125 21 | 266 04  | 343 38 |
|       | 22 179 42 | 8 53    | 205 01  | 206 56R | 66 07  | 136 20 | 266 21  | 343 06 |
| Oct.  | 2 189 30  | 3 58    | 206 15  | 202 29  | 66 01R | 147 38 | 266 48  | 342 34 |
|       | 12 199 23 | 1 30    | 196 43  | 192 21  | 65 35  | 159 14 | 267 24  | 342 03 |
|       | 22 209 18 | 0 05    | 192 08D | 195 58  | 64 50  | 171 03 | 268 07  | 341 31 |
| Nov.  | 1 219 17  | 359 60D | 202 11  | 209 49  | 63 49  | 183 03 | 268 58  | 340 59 |
|       | 11 229 19 | 1 10    | 217 45  | 225 47  | 62 36  | 195 12 | 269 55  | 340 27 |
|       | 21 239 24 | 3 28    | 233 47  | 241 43  | 61 16  | 207 28 | 270 56  | 339 56 |
| Dec.  | 1 249 31  | 6 40    | 249 35  | 257 26  | 59 54  | 219 48 | 272 02  | 339 24 |
|       | 11 259 41 | 10 35   | 266 17  | 273 10  | 58 39  | 232 13 | 273 11  | 338 52 |
|       | 21 269 51 | 15 03   | 281 04  | 288 56  | 57 34  | 244 41 | 274 21  | 338 20 |
|       | 31 280 02 | 19 57   | 296 37  | —       | 56 45  | 257 10 | 275 32  | 337 48 |

Ayanamsa : 22° 14' 40"

| 1988  | Sun. | Tues.  | Thurs  | Sat.   | Mon.   | Wed.   | Fri.   |
|-------|------|--------|--------|--------|--------|--------|--------|
| Jan.  | 1    |        |        |        |        |        | 71 15  |
|       | 13   | 95 57  | 120 05 | 148 48 | 167 26 | 191 29 | 243 32 |
|       | 17   | 272 21 | 302 31 | 332 48 | 2 00   | 29 36  | 55 42  |
|       | 31   | 104 59 |        |        |        |        | 80 42  |
| Feb.  | 1    |        |        |        | 116 57 | 140 41 | 164 20 |
|       | 7    | 188 13 | 212 47 | 238 36 | 266 07 | 295 22 | 325 42 |
|       | 21   | 24 48  | 51 57  | 77 32  | 101 58 |        | 355 53 |
| March | 1    |        | 137 38 | 161 18 | 185 16 | 209 47 | 235 09 |
|       | 13   | 289 42 | 318 59 | 348 55 | 18 30  | 46 47  | 73 23  |
|       | 27   | 122 30 | 146 09 | 169 55 |        |        | 261 43 |
| April | 1    |        |        |        |        |        | 98 27  |
|       | 3    | 206 39 | 232 09 | 258 33 | 285 54 | 314 08 | 343 05 |
|       | 17   | 40 51  | 68 15  | 94 07  | 118 41 | 142 29 | 166 10 |
| May   | 1    | 215 32 | 241 45 | 268 55 | 296 43 | 324 53 | 353 09 |
|       | 15   | 49 25  | 76 21  | 102 03 | 126 35 | 150 22 | 174 06 |
|       | 29   | 223 58 | 250 51 |        |        |        | 21 34  |
| June  | 1    |        |        |        |        | 264 45 | 293 06 |
|       | 5    | 321 40 | 350 00 | 17 54  | 45 16  | 71 57  | 97 43  |
|       | 19   | 146 30 | 170 00 | 194 05 | 219 02 | 245 32 | 273 37 |
| July  | 1    |        |        |        |        |        | 302 45 |
|       | 3    | 332 03 | 0 46   | 28 34  | 55 25  | 81 25  | 106 34 |
|       | 17   | 154 46 | 178 20 | 202 16 | 227 11 | 253 41 | 281 57 |
|       | 31   | 341 35 |        |        |        |        | 311 35 |
| Aug.  | 1    |        |        |        |        | 356 22 | 25 04  |
|       | 7    | 78 26  | 103 29 | 127 47 | 151 34 | 175 09 | 198 52 |
|       | 21   | 248 50 | 275 58 | 304 55 | 335 03 | 5 16   | 34 29  |
| Sep.  | 1    |        |        | 48 29  | 75 14  | 100 33 | 124 51 |
|       | 11   | 172 11 | 195 55 | 220 06 | 245 06 | 271 18 | 299 01 |
|       | 25   | 358 25 | 22 25  | 57 12  |        |        | 148 36 |
| Oct.  | 1    |        |        |        | 11 12  | 109 31 | 133 42 |
|       | 11   | 180 51 | 204 57 | 229 34 | 254 56 | 281 15 | 308 41 |
|       | 23   | 6 49   | 36 30  | 65 16  | 92 25  | 117 52 | 157 20 |
| Nov.  | 1    |        | 130 05 | 153 54 | 177 30 | 201 23 | 226 12 |
|       | 13   | 278 14 | 305 22 | 333 12 | 1 40   | 30 34  | 59 15  |
|       | 27   | 113 10 | 137 58 |        |        |        | 251 49 |
| Dec.  | 1    |        |        | 161 50 | 185 22 | 209 35 | 234 41 |
|       | 11   | 288 12 | 316 02 | 344 07 | 12 17  | 40 24  | 64 40  |
|       | 25   | 121 01 | 145 43 | 169 35 | 193 14 |        | 260 57 |

Ayanamsa : 27° 14' 40"

## Longitudes of Planets

|       | 1989 | Sun    | Mars   | Merc.   | Merc.   | Jupit. | Venus   | Sat.    | Rahu   |
|-------|------|--------|--------|---------|---------|--------|---------|---------|--------|
| Jan.  | 5    | 211 01 | 22 31  | 303 40  | 309 14  | 56 28R | 263 26  | 276 07  | 337 33 |
|       | 15   | 295 20 | 27 53  | 311 50R | 309 59  | 56 07  | 275 57  | 277 17  | 337 01 |
|       | 25   | 305 30 | 33 27  | 304 22  | 298 44  | 56 08D | 288 28  | 278 24  | 336 29 |
| Feb.  | 4    | 315 39 | 39 11  | 296 06D | 296 45  | 56 29  | 300 59  | 279 28  | 335 57 |
|       | 14   | 325 47 | 45 11  | 299 48  | 304 25  | 57 09  | 313 30  | 280 28  | 335 26 |
|       | 24   | 335 51 | 51 01  | 310 06  | 316 33  | 58 07  | 326 00  | 281 21  | 334 54 |
| March | 6    | 345 54 | 57 03  | 323 36  | 331 10  | 59 21  | 338 29  | 282 08  | 334 22 |
|       | 16   | 355 53 | 63 08  | 339 14  | 347 49  | 60 49  | 350 57  | 282 48  | 333 50 |
|       | 26   | 5 48   | 69 15  | 356 55  | 6 33    | 62 28  | 3 24    | 283 19  | 333 18 |
| April | 5    | 15 41  | 75 23  | 16 41   | 27 06   | 64 18  | 15 49   | 283 40  | 332 47 |
|       | 15   | 25 30  | 81 33  | 37 19   | 46 41   | 66 17  | 28 12   | 283 53  | 332 15 |
|       | 25   | 35 15  | 87 43  | 54 36   | 60 41   | 68 22  | 40 34   | 283 55R | 331 43 |
| May   | 5    | 44 58  | 93 54  | 64 45   | 66 40R  | 70 32  | 52 54   | 283 48  | 331 11 |
|       | 15   | 54 38  | 100 06 | 66 29   | 64 34   | 72 47  | 65 12   | 283 31  | 330 40 |
|       | 25   | 64 15  | 106 17 | 61 48   | 59 20   | 75 04  | 77 29   | 283 06  | 330 08 |
| June  | 4    | 73 50  | 112 29 | 58 11D  | 58 48   | 77 23  | 89 44   | 282 33  | 329 36 |
|       | 14   | 83 24  | 118 42 | 61 16   | 65 28   | 79 42  | 101 58  | 281 54  | 329 04 |
|       | 24   | 92 57  | 124 55 | 71 14   | 78 29   | 82 00  | 114 09  | 281 12  | 328 33 |
| July  | 4    | 102 29 | 131 09 | 87 06   | 96 54   | 84 17  | 126 19  | 280 28  | 328 01 |
|       | 14   | 112 01 | 137 24 | 107 27  | 118 09  | 86 30  | 138 27  | 279 44  | 327 29 |
|       | 24   | 121 34 | 143 40 | 128 31  | 138 16  | 88 39  | 150 02  | 279 03  | 326 57 |
| Aug.  | 3    | 131 07 | 149 58 | 147 21  | 155 45  | 90 43  | 162 34  | 278 27  | 326 25 |
|       | 13   | 140 43 | 156 17 | 163 29  | 170 32  | 92 39  | 174 32  | 277 57  | 325 54 |
|       | 23   | 150 20 | 162 37 | 176 52  | 182 20  | 94 28  | 186 26  | 277 35  | 325 22 |
| Sep.  | 2    | 160 00 | 169 00 | 186 43  | 189 38  | 96 06  | 198 16  | 277 21  | 324 50 |
|       | 12   | 169 42 | 175 25 | 190 31R | 188 48  | 97 33  | 209 59  | 277 18  | 324 18 |
|       | 22   | 179 27 | 181 53 | 184 27  | 179 09  | 98 46  | 221 35  | 277 24D | 323 47 |
| Oct.  | 2    | 189 16 | 188 23 | 175 52  | 176 49D | 99 44  | 233 02  | 277 40  | 323 15 |
|       | 12   | 199 08 | 194 56 | 181 27  | 188 25  | 100 25 | 244 17  | 278 05  | 322 43 |
|       | 22   | 209 04 | 201 32 | 196 28  | 204 51  | 100 48 | 255 17  | 278 39  | 322 11 |
| Nov.  | 1    | 219 03 | 208 11 | 213 12  | 221 26  | 100 51 | 265 56  | 279 22  | 321 39 |
|       | 11   | 229 05 | 214 53 | 229 30  | 237 26  | 100 34 | 276 06  | 280 11  | 321 08 |
|       | 21   | 239 09 | 221 39 | 245 16  | 253 01  | 99 57  | 285 32  | 281 07  | 320 36 |
| Dec.  | 1    | 249 17 | 228 28 | 260 43  | 268 20  | 99 03  | 293 56  | 282 08  | 320 04 |
|       | 11   | 259 26 | 235 21 | 275 49  | 282 59  | 97 55  | 300 10  | 283 14  | 319 32 |
|       | 21   | 269 36 | 242 18 | 289 24  | 294 11  | 96 38  | 305 13  | 284 22  | 319 01 |
|       | 31   | 279 48 | 249 18 | 295 50R | —       | 95 16  | 306 19R | 285 32  | 318 29 |

Ayanamsa : 22° 15' 30"



1989 A.D.

# RAMAN'S EPHEMERIS Longitude of the Moon

199

| 1989  | Sun.      | Tues.  | Thurs. | Sat.   | Mon.   | Wed.   | Fri.   |
|-------|-----------|--------|--------|--------|--------|--------|--------|
| Jan.  | 1 205 12  | 229 50 | 255 47 | 283 11 | 311 39 | 340 29 | 9 06   |
|       | 15 37 09  | 64 30  | 91 05  | 116 47 | 141 36 | 165 40 | 189 19 |
|       | 29 213 06 | 237 40 |        |        |        | 250 26 | 277 10 |
| Feb.  | I         |        |        |        |        | 87 58  | 113 27 |
|       | 15 305 33 | 335 02 | 4 42   | 33 40  | 61 26  |        |        |
|       | 19 138 06 | 162 09 | 185 51 | 209 32 | 233 37 |        |        |
| March | 1         |        |        |        |        | 258 40 | 285 11 |
|       | 5 313 26  | 343 11 | 13 29  | 43 08  | 71 18  | 96 18  | 122 56 |
|       | 19 147 09 | 170 55 | 194 34 | 218 23 | 242 37 | 267 40 | 293 57 |
| April | 1         |        |        | 307 40 | 336 23 | 6 26   | 36 48  |
|       | 9 66 13   | 93 51  | 119 40 | 144 09 | 167 56 | 191 33 | 215 23 |
|       | 23 239 41 | 264 36 | 290 21 | 317 13 |        |        |        |
| May   | I         |        |        |        | 345 29 | 15 00  | 45 04  |
|       | 7 74 27   | 102 15 | 128 12 | 152 43 | 176 29 | 200 09 | 224 12 |
|       | 21 248 55 | 274 21 | 300 33 | 327 36 | 355 36 | 24 31  |        |
| June  | 1         |        | 39 11  | 68 25  | 96 43  | 123 29 | 148 41 |
|       | 11 172 48 | 196 30 | 220 27 | 245 07 | 270 44 | 297 14 | 324 29 |
|       | 25 352 19 | 20 38  | 49 12  |        |        |        |        |
| July  | I         |        |        | 82 34  | 105 10 | 131 31 | 156 36 |
|       | 9 180 43  | 204 28 | 228 29 | 253 21 | 279 23 | 306 35 | 334 39 |
|       | 23 3 09   | 31 39  | 59 49  | 87 24  | 114 08 |        |        |
| Aug.  | 1         | 127 08 | 152 23 | 176 44 | 200 34 | 224 22 | 248 44 |
|       | 13 274 14 | 301 12 | 329 33 | 358 46 | 28 03  | 56 39  | 84 14  |
|       | 27 110 43 | 136 14 | 160 57 |        |        |        |        |
| Sep.  | 1         |        |        |        |        |        | 173 04 |
|       | 3 196 58  | 220 40 | 244 37 | 269 23 | 295 31 | 323 20 | 352 43 |
|       | 17 22 51  | 52 32  | 80 55  | 107 44 | 133 14 | 157 49 | 181 51 |
| Oct.  | 1 265 36  | 229 19 | 253 18 | 277 58 | 303 51 | 331 27 | 0 51   |
|       | 15 31 20  | 61 36  | 90 25  | 117 21 | 142 40 | 166 58 | 190 46 |
|       | 29 214 28 | 239 19 |        |        |        |        |        |
| Nov.  | 1         |        |        |        |        | 250 20 | 274 45 |
|       | 5 299 57  | 326 23 | 354 30 | 24 18  | 54 42  | 84 35  | 112 46 |
|       | 19 139 01 | 169 46 | 187 41 | 211 22 | 235 14 | 259 31 |        |
| Dec.  | I         |        |        |        |        |        | 284 20 |
|       | 3 309 50  | 336 18 | 4 03   | 33 06  | 62 56  | 92 29  | 120 40 |
|       | 17 147 07 | 172 01 | 196 01 | 219 44 | 243 44 | 268 21 | 293 45 |
|       | 31 319 54 |        |        |        |        |        |        |

Ayanamsa : 22° 15' 30"

# RAMAN'S EPHEMERIS Longitudes of Planets

1990 A.D.

| 1990  | Sun       | Mars   | Merc.   | Merc.   | Jupit.  | Venus   | Saturn  | Rahu   |
|-------|-----------|--------|---------|---------|---------|---------|---------|--------|
| Jan.  | 5 284 53  | 252 49 | 292 55R | 286 39  | 94 36R  | 305 21R | 286 08  | 318 13 |
|       | 15 295 05 | 259 55 | 281 21  | 279 43D | 93 21   | 300 41  | 287 19  | 317 41 |
|       | 25 305 15 | 267 04 | 281 24  | 285 17  | 92 18   | 294 46  | 288 29  | 317 09 |
| Feb.  | 4 315 25  | 279 16 | 290 31  | 296 38  | 91 29   | 291 14  | 289 37  | 316 38 |
|       | 14 325 32 | 281 31 | 303 22  | 310 35  | 90 59   | 291 39D | 290 41  | 316 06 |
|       | 24 335 37 | 288 50 | 318 14  | 326 18  | 90 ■    | 295 34  | 291 42  | 315 34 |
| March | 6 345 39  | 296 11 | 334 47  | 343 44  | 90 58D  | 301 57  | 292 36  | 315 02 |
|       | 16 355 38 | 303 35 | 353 09  | 3 00    | 91 26   | 310 00  | 293 25  | 314 31 |
|       | 26 5 34   | 311 01 | 13 06   | 23 00   | 92 13   | 319 10  | 294 05  | 313 59 |
| April | 5 15 26   | 318 28 | 32 00   | 39 21   | 93 16   | 329 06  | 294 38  | 313 27 |
|       | 15 25 15  | 325 57 | 44 29   | 47 08   | 94 33   | 339 33  | 295 01  | 312 55 |
|       | 25 35 01  | 333 25 | 47 17R  | 45 21   | 96 02   | 350 23  | 295 16  | 312 23 |
| May   | 5 44 44   | 340 53 | 42 19   | 39 30   | 97 43   | 1 30    | 295 20R | 311 52 |
|       | 15 54 24  | 348 20 | 38 01   | 38 22   | 99 33   | 12 49   | 295 15  | 311 20 |
|       | 25 64 01  | 355 ■■ | 40 34D  | 44 24   | 101 30  | 24 18   | 295 00  | 310 48 |
| June  | 4 73 37   | 3 04   | 49 41   | 56 14   | 103 33  | 35 54   | 294 36  | 310 16 |
|       | 14 83 10  | 10 19  | 64 00   | 72 55   | 105 40  | 47 36   | 294 05  | 309 45 |
|       | 24 92 43  | 17 28  | 82 53   | 93 33   | 107 52  | 59 24   | 293 27  | 309 13 |
| July  | ■ 102 15  | 24 27  | 104 25  | 114 59  | 110 05  | 71 16   | 292 46  | 308 41 |
|       | 14 111 47 | 31 16  | 124 53  | 134 02  | 112 20  | 83 13   | 292 02  | 308 09 |
|       | 24 121 20 | 37 52  | 142 26  | 150 03  | 114 34  | 95 14   | 291 18  | 307 38 |
| Aug.  | 3 130 54  | 44 12  | 156 53  | 162 50  | 116 47  | 107 20  | 290 36  | 307 06 |
|       | 13 140 29 | 50 13  | 167 46  | 171 24  | 118 58  | 119 29  | 289 58  | 306 34 |
|       | 23 150 06 | 55 51  | 173 21R | 173 08  | 121 06  | 131 44  | 289 26  | 306 02 |
| Sep.  | 2 159 46  | 60 59  | 170 28  | 165 54  | 123 08  | 144 01  | 289 03  | 305 31 |
|       | 12 169 28 | 65 32  | 161 28  | 159 36D | 125 04  | 156 23  | 288 48  | 304 59 |
|       | 22 179 14 | 68 51  | 161 34  | 166 57  | 126 53  | 168 47  | 288 42  | 304 27 |
| Oct.  | 2 189 02  | 72 16  | 174 31  | 183 05  | 128 32  | 181 14  | 288 46D | 303 55 |
|       | 12 198 54 | 74 04  | 191 53  | 200 35  | 130 01  | 193 44  | 289 00  | 303 23 |
|       | 22 208 50 | 74 32R | 209 03  | 217 17  | 131 16  | 206 15  | 289 24  | 302 52 |
| Nov.  | 1 218 48  | 73 33  | 225 17  | 233 05  | 132 17  | 218 47  | 289 57  | 302 20 |
|       | 11 228 50 | 71 10  | 240 45  | 248 16  | 133 02  | 231 19  | 290 38  | 301 48 |
|       | 21 238 55 | 67 44  | 255 37  | 262 43  | 133 28  | 243 53  | 291 27  | 301 16 |
| Dec.  | 1 249 02  | 63 59  | 269 22  | 275 06  | 133 35R | 256 26  | 292 22  | 300 45 |
|       | 11 259 11 | 60 44  | 279 04  | 279 44R | 133 23  | 269 00  | 293 23  | 300 13 |
|       | 21 269 21 | 58 34  | 275 54  | 269 18  | 132 51  | 281 33  | 294 28  | 299 41 |
|       | 31 279 33 | 57 45  | 264 34  | —       | 132 01  | 294 06  | 295 36  | 299 09 |

Ayanamsa : 22° 16' 20"

## Longitude of the Moon

| 1990  | Sun. | Tues.  | Thurs. | Sat.   | Mon.   | Wed.   | Fri.   |
|-------|------|--------|--------|--------|--------|--------|--------|
| Jan.  | 1    |        |        |        | 330 17 | 0 38   | 33 47  |
|       | 7    | 57 34  | 86 28  | 114 45 | 141 48 | 167 27 | 191 56 |
|       | 21   | 239 38 | 264 04 | 289 26 | 315 55 | 343 21 | 11 25  |
| Feb.  | 1    |        |        | 25 35  | 53 58  | 82 09  | 109 50 |
|       | 11   | 162 40 | 187 34 | 211 41 | 235 28 | 259 31 | 284 26 |
|       | 25   | 338 20 | 7 06   |        |        |        | 310 40 |
| March | 1    |        | 36 12  | 64 55  | 92 48  | 119 44 | 145 49 |
|       | 11   | 171 06 | 195 42 | 219 43 | 243 29 | 267 28 | 292 16 |
|       | 25   | 346 30 | 15 58  | 45 56  | 75 16  |        | 318 31 |
| April | 1    | 89 27  | 116 44 | 142 44 | 167 49 | 192 16 | 216 18 |
|       | 15   | 263 53 | 288 08 | 313 27 | 9 16   | 216 18 | 240 05 |
|       | 25   | 99 05  |        |        |        | 39 31  | 69 53  |
| May   | 1    |        | 126 33 | 152 26 | 177 12 | 201 20 | 225 10 |
|       | 13   | 272 50 | 297 11 | 322 28 | 349 14 | 17 49  | 47 53  |
|       | 27   | 107 51 | 135 36 | 161 35 |        |        | 78 21  |
| June  | 1    |        |        |        |        |        | 174 04 |
|       | 3    | 183 12 | 222 11 | 245 57 | 269 54 | 292 46 | 319 18 |
|       | 17   | 12 52  | 41 49  | 71 45  | 101 35 | 130 15 | 157 14 |
| July  | 1    | 206 58 | 230 47 | 254 37 | 271 48 | 303 37 | 329 13 |
|       | 15   | 23 16  | 51 49  | 81 00  | 110 07 | 138 23 | 165 17 |
|       | 29   | 215 09 | 239 00 |        |        |        | 190 46 |
| Aug.  | 1    |        |        |        |        | 250 54 | 275 00 |
|       | 5    | 299 51 | 325 40 | 352 29 | 20 07  | 48 19  | 76 47  |
|       | 19   | 133 10 | 160 14 | 186 11 | 211 01 | 235 03 | 258 50 |
| Sep.  | 1    |        |        | 295 23 | 321 06 | 348 10 | 16 19  |
|       | 9    | 45 00  | 73 35  | 101 40 | 129 07 | 155 51 | 181 47 |
|       | 23   | 231 05 | 254 52 | 278 41 | 303 13 |        | 206 51 |
| Oct.  | 1    |        |        |        | 329 05 | 356 39 | 25 38  |
|       | 7    | 55 11  | 79 18  | 112 23 | 139 22 | 165 25 | 190 43 |
|       | 21   | 239 24 | 263 05 | 286 49 | 311 13 | 337 00 | 4 39   |
| Nov   | 1    |        | 19 11  | 49 10  | 79 22  | 108 34 | 136 14 |
|       | 11   | 162 29 | 187 40 | 212 10 | 236 11 | 259 53 | 283 32 |
|       | 25   | 332 24 | 358 51 | 27 12  |        |        | 307 31 |
| Dec.  | 1    |        |        | 57 13  | 87 46  | 117 31 | 145 37 |
|       | 9    | 172 00 | 197 03 | 221 16 | 245 03 | 268 43 | 292 30 |
|       | 23   | 341 43 | 8 00   | 35 54  | 65 22  | 95 38  | 316 43 |

# RAMAN'S EPHEMERIS Longitudes of Planets

1991 A.D.

| 1991  | Sun       | Mars   | Merc.   | Merc.   | Jupit.  | Venus   | Sat.    | Rahu   |
|-------|-----------|--------|---------|---------|---------|---------|---------|--------|
| Jan.  | 5 284 11  | 57 51D | 263 57D | 266 35  | 131 31  | 300 22  | 296 11  | 298 53 |
|       | 15 294 50 | 58 56  | 271 13  | 277 00  | 130 21  | 312 54  | 297 22  | 298 22 |
|       | 25 305 01 | 61 03  | 283 30  | 290 29  | 129 03  | 325 24  | 298 34  | 297 50 |
| Feb.  | 4 315 10  | 64 00  | 297 50  | 305 32  | 127 43  | 337 51  | 299 44  | 297 18 |
|       | 14 325 17 | 67 36  | 313 34  | 321 57  | 126 27  | 350 16  | 300 53  | 296 46 |
|       | 24 335 22 | 71 42  | 330 43  | 339 53  | 125 20  | 2 37    | 301 58  | 296 15 |
| March | 6 345 24  | 76 12  | 349 24  | 359 09  | 124 27  | 14 54   | 302 59  | 295 43 |
|       | 16 355 24 | 81 00  | 8 40    | 17 14   | 123 51  | 27 05   | 303 55  | 295 11 |
|       | 26 5 20   | 86 04  | 23 54   | 27 55   | 123 34  | 39 10   | 304 45  | 294 39 |
| April | 5 15 12   | 91 18  | 28 58R  | 27 17   | 123 36D | 51 07   | 305 27  | 294 07 |
|       | 15 25 01  | 96 43  | 23 55   | 20 28   | 123 57  | 62 56   | 306 02  | 293 36 |
|       | 25 34 47  | 102 15 | 18 20   | 18 10   | 124 35  | 74 34   | 306 27  | 293 04 |
| May   | 5 44 30   | 107 53 | 19 58D  | 23 27   | 125 29  | 85 59   | 306 44  | 292 32 |
|       | 15 54 10  | 113 36 | 28 21   | 34 27   | 126 38  | 97 09   | 306 50  | 292 00 |
|       | 25 63 47  | 119 25 | 41 35   | 49 44   | 128 00  | 108 00  | 306 47R | 291 29 |
| June  | 4 73 23   | 125 17 | 58 51   | 68 53   | 129 33  | 118 25  | 306 34  | 290 57 |
|       | 14 82 57  | 131 13 | 79 37   | 90 35   | 131 16  | 128 18  | 306 12  | 290 25 |
|       | 24 92 29  | 137 13 | 101 15  | 111 16  | 133 07  | 137 24  | 305 42  | 289 53 |
| July  | 4 102 01  | 143 16 | 120 26  | 128 44  | 135 04  | 145 26  | 305 06  | 289 21 |
|       | 14 111 34 | 149 22 | 136 09  | 142 39  | 137 06  | 151 55  | 304 25  | 288 50 |
|       | 24 121 06 | 155 32 | 148 06  | 152 20  | 139 13  | 156 10  | 303 41  | 288 18 |
| Aug.  | 3 130 40  | 161 46 | 155 03  | 155 53R | 141 22  | 157 14R | 302 57  | 287 46 |
|       | 13 140 15 | 168 03 | 154 32  | 151 10  | 143 33  | 154 30  | 302 14  | 287 14 |
|       | 23 149 52 | 174 23 | 146 54  | 143 42  | 145 44  | 148 50  | 301 35  | 286 43 |
| Sep.  | 2 159 32  | 180 47 | 143 19D | 146 23  | 147 55  | 143 20  | 301 02  | 286 11 |
|       | 12 169 14 | 187 16 | 152 28  | 160 35  | 150 03  | 141 01  | 300 36  | 285 39 |
|       | 22 178 59 | 193 48 | 169 37  | 168 50  | 152 09  | 142 32D | 300 19  | 285 07 |
| Oct.  | 2 188 48  | 200 25 | 187 52  | 196 35  | 154 10  | 147 12  | 300 12  | 284 36 |
|       | 12 198 40 | 207 06 | 204 59  | 213 04  | 156 05  | 154 06  | 300 14D | 284 04 |
|       | 22 208 35 | 213 52 | 220 53  | 228 28  | 157 53  | 162 32  | 300 27  | 283 32 |
| Nov.  | 1 218 34  | 220 43 | 235 48  | 242 52  | 159 32  | 172 03  | 300 49  | 283 00 |
|       | 11 228 36 | 227 38 | 249 34  | 255 41  | 161 00  | 182 21  | 301 20  | 282 28 |
|       | 21 238 40 | 234 38 | 260 43  | 263 48R | 162 15  | 193 12  | 302 00  | 281 57 |
| Dec.  | 1 248 47  | 241 43 | 263 29  | 258 52  | 163 17  | 204 28  | 302 48  | 281 25 |
|       | 11 258 56 | 248 52 | 252 13  | 248 16D | 164 02  | 216 03  | 303 43  | 280 53 |
|       | 21 269 07 | 256 07 | 248 37  | 252 08  | 164 29  | 227 51  | 304 43  | 280 21 |
|       | 31 279 18 | 263 26 | 257 28  |         | 161 37  | 239 50  | 305 48  | 279 50 |

Ayanamsa : 22° 17' 11"

1991 A.D.

# RAMAN'S EPHEMERIS Longitude of the Moon

203

| 1991  | Sun. | Tues.  | Thurs. | Sat.   | Mon.   | Wed.   | Fri.   |
|-------|------|--------|--------|--------|--------|--------|--------|
| Jan.  | 1    | 110 42 | 139 59 | 167 35 | 193 28 | 218 03 | 241 54 |
|       | 13   | 265 33 | 289 24 | 313 44 | 338 04 | 4 43   | 59 57  |
|       | 27   | 89 09  | 118 42 | 147 44 |        |        |        |
| Feb.  | 1    |        |        |        |        |        | 161 47 |
|       | 11   | 188 42 | 214 04 | 238 17 | 261 59 | 285 45 | 310 07 |
|       | 17   | 1 34   | 28 38  | 56 23  | 84 41  | 113 17 | 141 50 |
| March | 1    |        |        |        |        |        | 169 44 |
|       | 9    | 196 29 | 221 53 | 246 18 | 269 53 | 293 42 | 318 17 |
|       | 17   | 11 04  | 38 59  | 67 18  | 95 35  | 123 37 | 151 18 |
|       | 31   | 214 37 |        |        |        |        | 178 23 |
| April | 1    |        |        |        |        | 217 20 | 241 59 |
|       | 7    | 289 33 | 313 42 | 339 00 | 5 52   | 34 09  | 63 13  |
|       | 21   | 120 30 | 148 00 | 174 43 | 200 40 | 225 49 | 265 53 |
| May   | 1    |        |        |        |        | 250 11 | 273 58 |
|       | 5    | 297 36 | 321 43 | 347 01 | 14 00  | 42 42  | 72 26  |
|       | 19   | 130 54 | 158 24 | 184 45 | 210 07 | 234 45 | 258 46 |
| June  | 1    |        |        |        |        | 294 10 | 318 03 |
|       | 9    | 36 27  | 65 52  | 96 07  | 125 59 | 154 34 | 181 34 |
|       | 23   | 231 48 | 255 46 | 279 25 | 303 04 |        | 8 44   |
| July  | 1    |        |        |        |        | 327 03 | 351 47 |
|       | 7    | 45 14  | 74 21  | 104 29 | 134 33 | 163 30 | 190 45 |
|       | 21   | 237 50 | 264 37 | 293 14 | 312 03 | 336 22 | 1 26   |
| Aug.  | 1    |        |        |        |        | 68 58  | 98 09  |
|       | 11   | 157 30 | 185 46 | 212 19 | 237 20 | 261 20 | 284 57 |
|       | 25   | 333 11 | 358 24 | 24 29  | 51 24  |        | 127 59 |
| Sep.  | 1    | 65 11  | 93 23  | 122 17 | 151 26 | 180 02 | 207 21 |
|       | 15   | 257 32 | 281 16 | 305 00 | 329 20 | 354 19 | 21 01  |
|       | 29   | 76 00  |        |        |        |        | 233 06 |
| Oct.  | 1    |        | 104 06 | 132 25 | 160 43 | 188 35 | 215 26 |
|       | 13   | 264 54 | 289 08 | 312 52 | 337 20 | 3 01   | 30 04  |
|       | 27   | 86 39  | 115 04 | 143 09 |        |        | 241 00 |
| Nov.  | 1    |        |        |        |        |        | 58 08  |
|       | 3    | 184 21 | 210 58 | 236 38 | 261 18 | 285 12 | 308 48 |
|       | 17   | 357 49 | 24 24  | 52 33  | 81 45  | 111 07 | 139 52 |
| Dec.  | 1    | 194 28 | 220 20 | 245 21 | 269 38 | 293 23 | 316 58 |
|       | 15   | 5 48   | 32 13  | 60 25  | 90 03  | 120 11 | 149 42 |
|       | 29   | 204 32 | 229 56 |        |        |        | 177 52 |

Ayanamsa : 22° 17' 11"

# RAMAN'S EPHEMERIS Longitudes of Planets

1992 A.D.

| 1992  | Sun       | Mars    | Merc.   | Merc.   | Jupit.  | Venus  | Saturn  | Rahu   |
|-------|-----------|---------|---------|---------|---------|--------|---------|--------|
| Jan.  | 1 284 24  | 267 07  | 263 45  | 270 36  | 164 34R | 245 52 | 306 22  | 279 34 |
|       | 15 294 35 | 274 32  | 277 49  | 285 17  | 164 14  | 258 01 | 307 31  | 279 02 |
|       | 25 304 46 | 282 01  | 293 01  | 301 10  | 163 35  | 270 15 | 308 43  | 278 30 |
| Feb.  | 4 314 55  | 289 35  | 309 16  | 317 50  | 162 40  | 282 31 | 309 54  | 277 58 |
|       | 14 325 03 | 297 11  | 326 44  | 335 56  | 161 32  | 294 50 | 311 06  | 277 27 |
|       | 24 335 11 | 304 50  | 345 16  | 356 04  | 160 16  | 307 10 | 312 15  | 276 55 |
| March | 6 346 10  | 313 18  | 3 46    | 9 09    | 158 50  | 320 45 | 313 28  | 276 20 |
|       | 16 356 09 | 321 02  | 11 16R  | 9 59    | 157 35  | 333 06 | 314 30  | 275 11 |
|       | 26 6 05   | 328 11  | 6 18    | 2 09    | 156 29  | 345 26 | 315 26  | 275 16 |
| April | 5 15 57   | 336 32  | 359 23  | 358 49  | 155 36  | 357 47 | 316 17  | 274 45 |
|       | 15 25 46  | 344 16  | 0 22D   | 3 42    | 154 59  | 10 07  | 317 01  | 274 13 |
|       | 25 35 31  | 352 00  | 8 27    | 14 20   | 154 40  | 22 26  | 317 36  | 273 41 |
| May   | 5 45 14   | 359 42  | 21 11   | 28 54   | 154 40D | 34 44  | 318 03  | 273 09 |
|       | 15 54 54  | 7 21    | 37 28   | 46 52   | 154 57  | 47 02  | 318 21  | 272 37 |
|       | 25 64 31  | 14 56   | 57 04   | 67 52   | 155 32  | 59 19  | 318 29  | 272 06 |
| June  | 4 74 06   | 22 27   | 78 50   | 89 27   | 156 23  | 71 37  | 318 27R | 271 34 |
|       | 14 83 40  | 29 53   | 99 11   | 108 13  | 157 29  | 83 54  | 318 15  | 271 02 |
|       | 24 93 13  | 37 12   | 116 08  | 123 00  | 158 47  | 96 11  | 317 54  | 270 30 |
| July  | 4 102 45  | 44 25   | 128 46  | 133 15  | 160 16  | 108 28 | 317 26  | 269 59 |
|       | 14 112 17 | 51 30   | 136 15  | 137 27R | 161 56  | 120 46 | 316 50  | 269 27 |
|       | 24 121 49 | 58 26   | 136 39  | 133 59  | 163 43  | 133 04 | 316 09  | 268 55 |
| Aug.  | 3 131 23  | 65 12   | 130 18  | 127 08  | 165 38  | 145 22 | 315 25  | 268 23 |
|       | 13 140 58 | 71 47   | 125 59D | 127 43  | 167 37  | 157 40 | 314 40  | 267 52 |
|       | 23 150 36 | 78 09   | 132 25  | 139 37  | 169 42  | 169 58 | 313 57  | 267 20 |
| Sep.  | 2 160 16  | 84 17   | 148 26  | 157 59  | 171 49  | 182 15 | 313 17  | 266 48 |
|       | 12 169 58 | 90 08   | 167 34  | 176 52  | 173 58  | 194 31 | 312 43  | 266 16 |
|       | 22 179 44 | 95 40   | 185 46  | 194 15  | 176 08  | 206 46 | 312 16  | 265 44 |
| Oct.  | 2 189 33  |         | 202 21  | 210 07  | 178 17  | 218 60 | 311 58  | 265 13 |
|       | 12 199 25 | 105 30  | 217 33  | 224 38  | 180 25  | 231 11 | 311 49  | 264 41 |
|       | 22 209 20 | 109 11  | 231 20  | 237 30  | 182 29  | 243 21 | 311 51D | 264 09 |
| Nov.  | 1 219 19  | 113 05  | 242 51  | 246 48  | 184 29  | 255 29 | 312 03  | 263 37 |
|       | 11 229 21 | 115 41  | 248 21R | 246 15  | 186 23  | 267 33 | 312 24  | 263 06 |
|       | 21 239 26 | 117 15  | 240 26  | 234 24  | 188 10  | 279 33 | 312 55  | 262 34 |
| Dec.  | 1 249 33  | 117 34R | 232 13D | 234 17  | 189 47  | 291 28 | 313 35  | 262 02 |
|       | 11 259 42 | 116 31  | 239 03  | 245 13  | 191 13  | 303 14 | 314 23  | 261 30 |
|       | 21 269 53 | 114 06  | 252 05  | 259 10  | 192 27  | 314 48 | 315 17  | 260 58 |
|       | 31 270 05 | 110 36  | 266 48  | —       | 193 26  | 326 07 | 316 18  | 260 27 |

Ayanamsa : 22° 18' 01"

1992 A.D.

# RAMAN'S EPHEMERIS Longitude of the Moon

205

| 1992  | Sun. | Tues.  | Thurs  | Sat.   | Mon.   | Wed.   | Fri.   |
|-------|------|--------|--------|--------|--------|--------|--------|
| Jan.  | 1    |        |        |        |        | 242 16 | 266 25 |
|       | 5    | 290 09 | 313 46 | 337 32 | 1 53   | 54 15  | 82 57  |
|       | 19   | 113 02 | 143 27 | 172 58 | 200 47 | 226 48 | 251 28 |
| Feb.  | 1    |        |        | 287 09 | 310 45 | 334 34 | 358 51 |
|       | 15   | 23 51  | 49 52  | 77 15  | 106 10 | 136 13 | 166 23 |
|       | 23   | 222 36 | 248 01 | 272 10 | 295 47 |        | 195 25 |
| March | 1    | 307 35 | 331 25 | 355 49 | 21 54  | 46 45  | 73 23  |
|       | 15   | 130 09 | 159 44 | 189 05 | 217 11 | 243 33 | 268 22 |
|       | 29   | 315 53 | 339 54 |        |        |        |        |
| April | 1    |        |        |        |        | 352 11 | 17 26  |
|       | 15   | 43 33  | 70 25  | 97 55  | 126 03 | 154 42 | 183 27 |
|       | 19   | 238 29 | 263 57 | 288 16 | 312 00 | 335 51 | 0 26   |
| May   | 1    |        |        |        |        |        | 16 06  |
|       | 3    | 52 53  | 80 33  | 108 43 | 137 02 | 165 19 | 193 15 |
|       | 17   | 246 45 | 271 54 | 296 08 | 319 53 | 343 47 | 2 25   |
|       | 31   | 61 35  |        |        |        |        | 34 11  |
| June  | 1    |        |        |        | 75 42  | 104 30 | 133 31 |
|       | 7    | 162 08 | 189 59 | 216 55 | 242 54 | 268 01 | 292 20 |
|       | 21   | 339 54 | 4 04   | 29 14  | 55 13  | 84 01  | 316 10 |
| July  | 1    |        |        |        |        | 113 37 | 143 25 |
|       | 5    | 172 34 | 200 28 | 226 59 | 252 22 | 276 56 | 300 57 |
|       | 19   | 348 27 | 12 37  | 37 40  | 64 09  | 92 22  | 122 07 |
| Aug.  | 1    |        |        | 167 29 | 196 29 | 223 46 | 249 26 |
|       | 9    | 274 00 | 297 57 | 321 40 | 345 26 | 9 28   | 34 05  |
|       | 23   | 110 46 | 115 33 | 145 41 | 176 05 | 205 25 | 59 42  |
| Sep.  | 1    |        | 219 24 | 245 57 | 270 55 | 294 58 | 318 40 |
|       | 13   | 6 33   | 31 09  | 56 26  | 82 43  | 110 19 | 139 21 |
|       | 27   | 199 12 | 227 43 |        |        |        |        |
| Oct.  | 1    |        |        | 254 24 | 279 27 | 303 30 | 327 13 |
|       | 11   | 15 33  | 40 39  | 66 27  | 93 03  | 120 36 | 149 01 |
|       | 25   | 207 31 | 235 41 | 262 19 | 287 27 |        |        |
| Nov.  | 1    | 299 36 | 323 28 | 347 16 | 11 35  | 36 46  | 62 52  |
|       | 15   | 117 27 | 145 35 | 174 01 | 202 25 | 230 18 | 257 10 |
|       | 29   | 307 23 |        |        |        |        |        |
| Dec.  | 1    |        | 331 16 | 355 06 | 19 27  | 44 50  | 71 31  |
|       | 13   | 127 53 | 156 35 | 184 55 | 212 38 | 239 34 | 265 39 |
|       | 27   | 315 17 | 339 09 | 2 56   |        |        |        |

Ayanamsa : 22° 18' 01"



# RAMAN'S EPHEMERIS Longitudes of Planets

1993 A.D.

| 1993  | Sun       | Mars           | Merc.   | Merc.   | Jupit.  | Venus  | Saturn  | Rahu |
|-------|-----------|----------------|---------|---------|---------|--------|---------|------|
| Jan.  | 5 285 10  | 108 38R 274 16 | 282 13  | 193 50  | 331 39  | 316 50 | 268 11  |      |
|       | 15 295 21 | 104 44         | 290 12  | 298 23  | 194 24  | 342 22 | 259 39  |      |
|       | 25 305 32 | 101 30         | 306 48  | 315 29  | 194 40  | 352 29 | 259 07  |      |
| Feb.  | 4 310 41  | 99 25          | 324 20  | 333 13  | 194 37R | 1 44   | 320 19  |      |
|       | 14 325 40 | 98 40          | 341 39  | 348 45  | 194 15  | 9 45   | 321 31  |      |
|       | 24 335 54 | 99 11D 353 14  | 354 00R | 193 36  | 15 58   | 322 43 | 257 32  |      |
| March | 6 345 56  | 100 46         | 351 05  | 346 17  | 192 40  | 19 32  | 323 53  |      |
|       | 16 355 55 | 103 13         | 342 10  | 340 21D | 191 33  | 19 29R | 325 00  |      |
|       | 26 5 50   | 106 24         | 341 01  | 343 43  | 190 11  | 15 29  | 326 11  |      |
| April | 5 15 43   | 110 07         | 347 58  | 353 25  | 189 01  | 9 22   | 326 32  |      |
|       | 15 25 32  | 114 18         | 359 49  | 7 02    | 187 47  | 4 45   | 327 54  |      |
|       | 25 35 17  | 118 49         | 14 59   | 23 40   | 186 41  | 3 54D  | 328 40  |      |
| May   | 5 45 00   | 123 39         | 33 05   | 43 13   | 185 48  | 6 42   | 329 18  |      |
|       | 15 54 40  | 128 42         | 53 55   | 64 50   | 185 10  | 12 14  | 329 47  |      |
|       | 25 64 17  | 133 58         | 75 26   | 85 13   | 184 49  | 19 37  | 330 07  |      |
| June  | 5 73 52   | 139 23         | 93 56   | 101 29  | 184 46D | 28 14  | 330 18  |      |
|       | 14 83 26  | 144 58         | 107 49  | 112 49  | 185 01  | 37 44  | 330 18R |      |
|       | 24 92 59  | 150 41         | 116 18  | 118 04R | 185 34  | 47 50  | 330 09  |      |
| July  | 4 102 31  | 156 31         | 117 56  | 116 00  | 186 22  | 58 22  | 329 51  |      |
|       | 14 112 03 | 162 27         | 112 55  | 109 54  | 187 25  | 69 15  | 329 24  |      |
|       | 24 121 36 | 168 31         | 108 15D | 108 49  | 188 41  | 80 25  | 328 50  |      |
| Aug.  | 3 131 09  | 174 40         | 111 56  | 117 32  | 190 08  | 91 47  | 328 10  |      |
|       | 13 140 45 | 180 55         | 125 16  | 134 30  | 191 46  | 103 21 | 327 26  |      |
|       | 23 150 22 | 187 16         | 144 25  | 154 22  | 193 32  | 115 05 | 326 41  |      |
| Sep.  | 2 160 02  | 193 43         | 163 58  | 173 06  | 195 26  | 126 57 | 325 56  |      |
|       | 12 169 44 | 200 16         | 181 45  | 189 56  | 197 25  | 138 58 | 325 15  |      |
|       | 22 179 30 | 206 55         | 197 41  | 205 00  | 199 29  | 151 06 | 324 39  |      |
| Oct.  | 2 189 18  | 213 40         | 211 54  | 218 16  | 201 37  | 163 20 | 324 10  |      |
|       | 12 199 10 | 220 30         | 223 58  | 228 40  | 203 46  | 175 40 | 323 50  |      |
|       | 22 209 06 | 227 27         | 231 46  | 232 19R | 205 56  | 188 04 | 323 39  |      |
| Nov.  | 1 219 05  | 234 30         | 229 18  | 223 16  | 208 06  | 200 31 | 323 39D |      |
|       | 11 229 07 | 241 38         | 217 53  | 216 42D | 210 15  | 213 02 | 323 48  |      |
|       | 21 239 12 | 248 52         | 219 39  | 225 09  | 212 20  | 225 34 | 324 08  |      |
| Dec.  | 1 249 19  | 256 12         | 231 53  | 239 12  | 214 21  | 238 08 | 324 38  |      |
|       | 11 259 28 | 263 37         | 246 44  | 254 24  | 216 16  | 250 42 | 325 16  |      |
|       | 21 269 39 | 271 07         | 262 08  | 269 57  | 218 03  | 263 17 | 326 03  |      |
|       | 31 279 50 | 278 42         | 277 52  | —       | 219 41  | 275 52 | 326 57  |      |

Ayanamsa : 22° 18' 51"

## Longitude of the Moon

| 1993  | Sun. | Tues.  | Thurs. | Sat.   | Mon.   | Wed.   | Fri.   |
|-------|------|--------|--------|--------|--------|--------|--------|
| Jan.  | 1    |        |        |        |        |        | 14 57  |
|       | 3    | 39 41  | 65 46  | 93 29  | 122 34 | 152 14 | 209 33 |
|       | 17   | 236 24 | 262 12 | 287 12 | 311 35 | 335 33 | 359 16 |
|       | 31   | 47 42  |        |        |        |        | 23 09  |
| Feb.  | 1    |        |        |        | 60 27  | 87 11  | 115 48 |
|       | 7    | 145 52 | 176 13 | 205 33 | 233 13 | 259 17 | 284 13 |
|       | 21   | 332 22 | 356 07 | 19 55  | 44 04  |        | 305 28 |
| March | 1    |        |        |        | 69 05  | 95 33  | 123 53 |
|       | 7    | 153 55 | 184 34 | 214 23 | 242 26 | 268 38 | 293 28 |
|       | 21   | 341 16 | 5 02   | 29 00  | 53 24  | 78 33  | 104 54 |
| April | 1    |        | 118 40 | 147 27 | 177 31 | 207 45 | 236 54 |
|       | 11   | 264 15 | 289 53 | 314 18 | 338 07 | 1 52   | 25 53  |
|       | 25   | 75 37  | 101 40 | 128 50 |        |        | 50 25  |
| May   | 1    |        |        | 157 14 | 186 34 | 216 07 | 244 54 |
|       | 9    | 272 14 | 298 00 | 322 33 | 346 25 | 10 14  | 34 28  |
|       | 23   | 85 16  | 112 01 | 139 36 | 167 53 | 196 35 | 59 25  |
| June  | 1    | 210 57 | 239 22 | 266 54 | 293 13 | 318 19 | 342 30 |
|       | 13   | 6 19   | 30 21  | 55 09  | 81 04  | 111 10 | 136 11 |
|       | 27   | 193 09 | 22 16  |        |        |        | 164 40 |
| July  | 1    |        | 248 48 | 275 34 | 301 25 | 326 19 | 350 28 |
|       | 11   | 14 15  | 38 16  | 63 09  | 89 24  | 117 11 | 146 06 |
|       | 25   | 204 04 | 231 54 | 258 47 | 284 49 |        | 175 20 |
| Aug.  | 1    | 297 32 | 322 28 | 346 43 | 10 32  | 34 17  | 58 35  |
|       | 15   | 111 19 | 140 17 | 170 14 | 199 59 | 228 35 | 255 46 |
|       | 29   | 306 51 | 331 20 |        |        |        | 281 45 |
| Sep.  | 1    |        |        |        |        | 343 23 | 7 14   |
|       | 11   | 45 54  | 54 49  | 79 33  | 105 45 | 133 50 | 163 38 |
|       | 19   | 233 54 | 252 00 | 278 41 | 303 56 | 328 21 | 352 19 |
| Oct.  | 1    |        |        |        |        |        | 16 03  |
|       | 11   | 39 47  | 63 49  | 88 36  | 114 39 | 142 27 | 171 56 |
|       | 17   | 232 23 | 260 58 | 287 46 | 313 03 | 337 20 | 1 09   |
|       | 31   | 48 48  |        |        |        |        | 24 52  |
| Nov.  | 1    |        |        |        | 60 55  | 85 36  | 111 11 |
|       | 7    | 137 59 | 166 12 | 195 39 | 225 34 | 254 52 | 282 45 |
|       | 21   | 333 47 | 357 45 | 21 27  | 45 23  | 69 54  |        |
| Dec.  | 1    |        |        |        |        | 95 12  | 121 22 |
|       | 5    | 148 27 | 176 25 | 205 07 | 234 09 | 262 51 | 290 32 |
|       | 19   | 341 45 | 50 45  | 29 28  | 53 30  | 72 23  | 164 22 |
|       |      |        |        |        |        |        | 131 24 |

Ayanamsa : 22° 18' 51"

# RAMAN'S EPHEMERIS Longitudes of Planets

1994 A.D.

| 1994  | Sun | Mars   | Merc.  | Merc.   | Jupit.  | Venus   | Saturn  | Rahu    |        |
|-------|-----|--------|--------|---------|---------|---------|---------|---------|--------|
| Jan.  | 5   | 284 55 | 282 31 | 285 55  | 294 08  | 220 26  | 282 10  | 327 26  | 240 51 |
|       | 15  | 295 07 | 290 11 | 302 30  | 310 59  | 221 47  | 294 45  | 328 29  | 240 19 |
|       | 25  | 305 17 | 297 56 | 319 23  | 327 16  | 222 54  | 307 19  | 329 36  | 239 11 |
| Feb.  | 4   | 315 27 | 305 43 | 334 41  | 337 15R | 223 46  | 319 52  | 330 46  | 239 16 |
|       | 14  | 325 34 | 313 32 | 336 41  | 332 22  | 224 21  | 332 24  | 331 58  | 238 44 |
|       | 24  | 335 39 | 321 23 | 326 59  | 323 25  | 224 37  | 343 55  | 333 11  | 238 12 |
| March | 6   | 345 41 | 329 15 | 322 43D | 324 31  | 224 36R | 357 23  | 334 24  | 237 40 |
|       | 16  | 355 40 | 337 07 | 328 09  | 333 08  | 224 15  | 9 50    | 335 35  | 237 09 |
|       | 26  | 5 36   | 344 58 | 339 05  | 345 50  | 223 37  | 22 13   | 336 43  | 236 37 |
| April | 5   | 15 28  | 352 48 | 353 17  | 1 22    | 222 43  | 34 33   | 337 48  | 236 05 |
|       | 15  | 25 17  | 0 35   | 10 05   | 19 27   | 221 37  | 46 51   | 338 49  | 235 33 |
|       | 25  | 35 03  | 8 20   | 29 27   | 40 00   | 220 24  | 59 04   | 339 43  | 235 02 |
| May   | 5   | 44 46  | 16 01  | 50 47   | 61 16   | 219 07  | 71 14   | 340 31  | 234 30 |
|       | 15  | 54 26  | 23 38  | 70 54   | 79 19   | 217 54  | 83 19   | 341 12  | 233 11 |
|       | 25  | 64 03  | 31 10  | 86 21   | 91 54   | 216 47  | 95 18   | 341 44  | 233 26 |
| June  | 4   | 73 38  | 38 38  | 95 50   | 98 00   | 215 53  | 107 14  | 342 07  | 232 54 |
|       | 14  | 83 12  | 45 59  | 98 17R  | 96 48   | 215 13  | 119 03  | 342 20  | 232 23 |
|       | 24  | 92 45  | 53 15  | 94 09   | 91 23   | 214 51  | 130 44  | 342 24R | 231 51 |
| July  | 4   | 102 17 | 60 24  | 89 38   | 89 44   | 214 46D | 142 17  | 342 17  | 231 19 |
|       | 14  | 111 49 | 67 27  | 91 57D  | 96 20   | 214 59  | 153 39  | 342 01  | 230 47 |
|       | 24  | 121 22 | 74 22  | 102 44  | 110 56  | 215 30  | 164 47  | 341 37  | 230 16 |
| Aug.  | 3   | 130 55 | 81 10  | 120 30  | 130 11  | 216 17  | 175 38  | 341 04  | 229 44 |
|       | 13  | 140 31 | 87 50  | 141 01  | 150 55  | 217 19  | 186 08  | 340 25  | 229 12 |
|       | 23  | 150 08 | 94 21  | 160 16  | 169 04  | 218 35  | 196 08  | 339 42  | 228 40 |
| Sep.  | 2   | 159 47 | 100 44 | 177 11  | 180 02  | 220 02  | 205 28  | 338 56  | 228 09 |
|       | 12  | 169 30 | 106 56 | 192 15  | 198 55  | 221 40  | 213 53  | 338 11  | 227 37 |
|       | 22  | 179 15 | 112 57 | 204 56  | 210 07  | 223 27  | 220 54  | 337 18  | 227 05 |
| Oct.  | 2   | 189 04 | 118 11 | 214 06  | 216 17  | 225 22  | 225 54  | 336 51  | 226 33 |
|       | 12  | 198 56 | 124 21 | 215 48R | 212 00  | 227 23  | 227 39  | 336 20  | 226 01 |
|       | 22  | 208 51 | 129 40 | 206 01  | 201 31  | 229 29  | 226 17R | 335 57  | 225 30 |
| Nov.  | 1   | 218 50 | 134 39 | 201 19D | 205 08  | 231 38  | 221 11  | 335 44  | 224 58 |
|       | 11  | 228 52 | 139 15 | 211 19  | 218 37  | 233 50  | 215 30  | 335 41D | 224 26 |
|       | 21  | 238 57 | 143 22 | 226 20  | 234 12  | 236 03  | 212 35  | 335 48  | 223 54 |
| Dec.  | 1   | 249 04 | 146 55 | 242 04  | 249 55  | 238 16  | 213 40D | 336 06  | 223 23 |
|       | 11  | 259 13 | 149 46 | 257 46  | 265 18  | 240 27  | 218 06  | 336 34  | 222 51 |
|       | 21  | 269 23 | 151 43 | 273 33  | 281 33  | 242 35  | 224 18  | 337 11  | 222 19 |
|       | 31  | 279 11 | 152 37 | 289 37  | —       | 244 38  | 233 24  | 337 57  | 221 47 |

Ayanamsa : 22° 19' 42"

## Longitude of the Moon

| 1994  | Sun. | Tues.  | Thurs. | Sat.   | Mon.   | Wed.   | Fri.   |
|-------|------|--------|--------|--------|--------|--------|--------|
| Jan.  | 1    |        |        | 145 13 | 173 14 | 201 28 | 229 41 |
|       | 9    | 257 42 | 285 11 | 311 46 | 337 13 | 1 37   | 49 09  |
|       | 23   | 73 37  | 99 22  | 126 36 | 155 00 | 183 51 |        |
| Feb.  | 1    | 198 12 | 226 30 | 254 08 | 281 07 | 307 24 | 332 54 |
|       | 13   | 357 32 | 21 27  | 45 04  | 69 02  | 94 04  | 120 44 |
|       | 27   | 178 41 |        |        |        |        | 149 08 |
| March | 1    | 208 18 | 237 05 | 264 41 | 291 12 | 316 50 | 341 44 |
|       | 13   | 5 59   | 29 45  | 53 21  | 77 16  | 102 12 | 128 44 |
|       | 27   | 187 05 | 217 20 | 246 45 |        |        |        |
| April | 1    |        |        |        |        |        | 260 55 |
|       | 3    | 288 06 | 313 55 | 338 44 | 2 54   | 26 38  | 74 01  |
|       | 17   | 98 25  | 124 00 | 151 14 | 180 14 | 210 26 | 240 42 |
| May   | 1    | 297 24 | 323 17 | 347 56 | 11 51  | 35 28  | 59 09  |
|       | 15   | 107 52 | 133 35 | 160 37 | 189 09 | 218 51 | 248 53 |
|       | 29   | 305 58 | 332 01 |        |        |        | 83 10  |
| June  | 1    |        |        |        |        | 344 30 | 8 41   |
|       | 5    | 32 20  | 56 00  | 80 06  | 104 54 | 130 34 | 157 10 |
|       | 19   | 213 24 | 242 43 | 272 00 | 300 25 | 327 22 | 352 45 |
| July  | 1    |        |        |        |        |        | 16 57  |
|       | 3    | 40 37  | 64 24  | 88 50  | 114 13 | 140 34 | 167 46 |
|       | 17   | 223 51 | 252 25 | 280 55 | 308 45 | 335 25 | 0 43   |
|       | 31   | 48 36  |        |        |        |        | 24 55  |
| Aug.  | 1    |        |        |        | 60 28  | 84 40  | 109 56 |
|       | 7    | 136 29 | 164 06 | 192 19 | 220 38 | 248 50 | 276 45 |
|       | 21   | 330 48 | 356 22 | 20 53  | 44 41  | 68 21  | 92 26  |
| Sep.  | 1    |        | 105 09 | 131 22 | 159 06 | 187 54 | 216 58 |
|       | 11   | 245 38 | 273 33 | 300 41 | 326 59 | 352 27 | 17 03  |
|       | 25   | 64 34  | 88 24  | 113 09 |        |        | 40 58  |
| Oct.  | 1    |        |        | 139 22 | 167 20 | 196 42 | 226 36 |
|       | 9    | 255 05 | 284 02 | 310 55 | 336 40 | 1 32   | 25 43  |
|       | 23   | 73 02  | 96 54  | 121 34 | 147 36 | 175 22 | 49 27  |
| Nov.  | 1    | 189 55 | 219 53 | 250 10 | 279 34 | 307 25 | 333 38 |
|       | 13   | 358 34 | 22 41  | 46 22  | 69 60  | 93 50  | 118 11 |
|       | 27   | 170 02 | 198 13 |        |        |        | 143 27 |
| Dec.  | 1    |        | 227 52 | 258 12 | 288 01 | 316 17 | 342 41 |
|       | 11   | 7 34   | 31 29  | 55 05  | 78 48  | 102 57 | 127 43 |
|       | 25   | 179 46 | 207 29 | 236 28 | 266 16 |        | 153 15 |

Ayanamsa : 22° 19' 42"

# RAMAN'S EPHEMERIS Longitudes of Planets

1995 A.D.

| 1995  | Sun       | Mars    | Merc.   | Merc.  | Jupit.  | Venus  | Sat.    | Rahu   |
|-------|-----------|---------|---------|--------|---------|--------|---------|--------|
| Jan.  | 5 284 41  | 152 37R | 297 43  | 305 37 | 245 37  | 238 04 | 338 23  | 221 31 |
|       | 15 294 52 | 151 37  | 312 54  | 318 36 | 247 31  | 248 01 | 339 19  | 220 60 |
|       | 25 305 03 | 149 18  | 321 12R | 319 23 | 249 17  | 258 36 | 340 21  | 220 28 |
| Feb.  | 4 315 12  | 145 53  | 313 59  | 308 31 | 250 52  | 269 37 | 341 28  | 219 56 |
|       | 14 325 19 | 141 57  | 305 49D | 306 13 | 252 16  | 280 56 | 342 38  | 219 24 |
|       | 24 335 24 | 138 12  | 309 01  | 313 25 | 253 26  | 292 29 | 343 50  | 218 53 |
| March | 6 345 27  | 135 17  | 318 57  | 325 18 | 254 21  | 304 12 | 345 04  | 218 21 |
|       | 16 355 26 | 133 35  | 332 19  | 339 54 | 254 59  | 316 02 | 346 17  | 217 49 |
|       | 26 5 22   | 133 11D | 348 02  | 356 43 | 255 19  | 327 57 | 347 30  | 217 17 |
| April | 5 15 14   | 133 58  | 5 59    | 15 49  | 255 21R | 339 56 | 348 40  | 216 45 |
|       | 15 25 03  | 135 47  | 26 09   | 36 43  | 255 04  | 351 58 | 349 47  | 216 14 |
|       | 25 34 49  | 138 25  | 47 00   | 56 23  | 254 30  | 4 01   | 350 49  | 215 42 |
| May   | 5 44 32   | 141 45  | 64 23   | 70 42  | 253 39  | 16 07  | 351 46  | 215 10 |
|       | 15 54 12  | 145 37  | 75 12   | 77 45  | 252 36  | 28 13  | 352 36  | 214 38 |
|       | 25 63 49  | 149 55  | 78 18R  | 77 01  | 251 23  | 40 21  | 353 20  | 214 07 |
| June  | 4 73 25   | 154 36  | 74 31   | 71 51  | 250 07  | 52 29  | 353 55  | 213 35 |
|       | 14 82 59  | 159 35  | 70 06   | 70 00D | 248 53  | 64 39  | 354 21  | 213 03 |
|       | 24 92 31  | 164 50  | 71 49   | 75 31  | 247 45  | 76 50  | 354 38  | 212 31 |
| July  | 4 102 04  | 170 18  | 80 58   | 88 04  | 246 48  | 89 03  | 354 45  | 211 59 |
|       | 14 111 35 | 175 59  | 96 40   | 106 29 | 246 05  | 101 18 | 354 41R | 211 28 |
|       | 24 121 08 | 181 50  | 116 58  | 127 31 | 245 39  | 113 34 | 354 28  | 210 56 |
| Aug.  | 3 130 42  | 187 52  | 137 41  | 147 15 | 245 32D | 125 53 | 354 06  | 210 24 |
|       | 13 140 17 | 194 03  | 156 10  | 164 27 | 245 42  | 138 13 | 353 35  | 209 52 |
|       | 23 149 54 | 200 23  | 172 08  | 179 13 | 246 11  | 150 05 | 352 58  | 209 21 |
| Sep.  | 2 159 33  | 206 51  | 185 37  | 191 13 | 246 56  | 162 59 | 352 15  | 208 49 |
|       | 12 169 15 | 213 28  | 195 48  | 198 59 | 247 58  | 175 24 | 351 30  | 208 17 |
|       | 22 179 01 | 220 12  | 200 10R | 198 31 | 249 13  | 187 50 | 350 44  | 207 45 |
| Oct.  | 2 188 49  | 227 04  | 194 14  | 188 39 | 250 41  | 200 16 | 349 59  | 207 13 |
|       | 12 198 41 | 234 03  | 185 14D | 186 04 | 252 21  | 212 43 | 349 20  | 206 42 |
|       | 22 208 37 | 241 10  | 190 41  | 197 31 | 254 10  | 225 09 | 348 46  | 206 10 |
| Nov.  | 1 218 35  | 248 24  | 205 21  | 213 29 | 256 07  | 237 36 | 348 21  | 205 38 |
|       | 11 228 37 | 255 44  | 221 39  | 229 44 | 258 11  | 250 03 | 348 05  | 205 06 |
|       | 21 238 42 | 263 10  | 237 43  | 245 36 | 260 20  | 262 29 | 347 59  | 204 35 |
| Dec.  | 1 248 49  | 270 42  | 253 26  | 261 14 | 262 33  | 274 54 | 348 04D | 204 03 |
|       | 11 258 58 | 278 19  | 269 02  | 276 49 | 264 49  | 287 18 | 348 20  | 203 31 |
|       | 21 269 08 | 286 01  | 284 30  | 291 54 | 267 05  | 299 40 | 348 46  | 202 59 |
|       | 31 279 20 | 293 47  | 298 32  | —      | 269 22  | 312 00 | 349 22  | 202 27 |

Ayanamsa : 22° 20' 32''

# RAMAN'S EPHEMERIS Longitude of the Moon

| 1995  | Sun.                                  | Tues.                      | Thurs.           | Sat.             | Mon.             | Wed.             | Fri.             |
|-------|---------------------------------------|----------------------------|------------------|------------------|------------------|------------------|------------------|
| Jan.  | 1 281 11<br>15 99 29<br>29 289 42     | 310 20<br>124 36<br>318 18 | 337 52<br>150 12 | 3 37<br>176 42   | 27 60<br>203 56  | 51 40<br>231 56  | 75 19<br>260 39  |
| Feb.  | 1<br>5 23 49<br>19 200 45             | 47 49<br>228 44            | 71 27<br>256 55  | 95 26<br>285 11  | 120 17<br>313 12 | 332 11<br>146 13 | 358 45<br>173 09 |
| March | 1<br>5 31 34<br>19 210 40             | 55 35<br>239 24            | 79 15<br>267 54  | 103 16<br>295 51 | 128 15<br>323 06 | 340 29<br>154 34 | 6 38<br>182 11   |
| April | 1<br>9 123 31<br>23 320 03            | 149 08<br>346 20           | 176 19<br>11 36  | 204 59<br>36 05  | 27 25<br>51 38   | 75 22<br>263 58  | 99 07<br>292 36  |
| May   | 1<br>7 131 50<br>21 330 07            | 157 19<br>356 09           | 184 23<br>20 59  | 213 10<br>45 04  | 60 02<br>243 10  | 83 42<br>273 19  | 107 29<br>302 31 |
| June  | 1<br>11 236 22<br>25 65 52            | 266 45<br>89 32            | 296 56<br>113 27 | 325 45           | 128 28<br>153 18 | 179 21<br>17 58  | 207 01<br>42 10  |
| July  | 1<br>9 245 10<br>23 74 34             | 275 13<br>98 19            | 305 20<br>122 30 | 137 48<br>334 16 | 162 51<br>1 21   | 188 53<br>26 42  | 216 16<br>50 53  |
| Aug.  | 1<br>13 356 11<br>27 169 28           | 185 48<br>22 23            | 212 35<br>47 08  | 240 29<br>71 02  | 269 28<br>94 46  | 299 04<br>118 53 | 328 17<br>143 45 |
| Sep.  | 1<br>3 265 23<br>17 90 51             | 294 06<br>114 47           | 322 48<br>139 26 | 350 45<br>165 09 | 17 27<br>191 59  | 42 47<br>219 43  | 237 07<br>67 04  |
| Oct.  | 1<br>15 98 43<br>29 287 16            | 304 40<br>122 38           | 332 30<br>147 18 | 359 34<br>173 11 | 25 40<br>200 32  | 50 43<br>229 07  | 247 58<br>74 56  |
| Nov.  | 1<br>5 21 46<br>19 194 30             | 315 29<br>222 50           | 310 36<br>252 32 | 94 57<br>282 35  | 118 42<br>311 49 | 329 13<br>142 49 | 355 57<br>167 54 |
| Dec.  | 1<br>3 31 10<br>17 202 32<br>31 40 34 | 55 39<br>230 43            | 79 41<br>310 36  | 103 28<br>291 11 | 127 14<br>321 04 | 151 19<br>349 15 | 176 13<br>15 36  |

Ayanamsa : 22° 20' 32"

## Longitudes of Planets

| 1996  | Sun       | Mars   | Merc.   | Merc.   | Jupit.  | Venus  | Sat.   | Rahu   |
|-------|-----------|--------|---------|---------|---------|--------|--------|--------|
| Jan.  | 5 284 25  | 297 41 | 303 28  | 305 06  | 270 30  | 318 09 | 349 43 | 202 12 |
|       | 15 294 37 | 305 32 | 302 09R | 296 00  | 272 44  | 330 23 | 350 31 | 201 40 |
|       | 25 304 48 | 313 25 | 290 50  | 289 07D | 274 54  | 342 31 | 351 26 | 201 11 |
| Feb.  | 4 314 57  | 321 19 | 290 36  | 294 15  | 276 59  | 354 32 | 352 28 | 200 36 |
|       | 14 325 04 | 329 13 | 299 19  | 305 18  | 275 57  | 6 22   | 353 34 | 200 05 |
|       | 24 335 10 | 337 07 | 311 57  | 319 07  | 280 48  | 17 60  | 354 44 | 199 33 |
| March | 6 346 12  | 345 48 | 328 24  | 336 38  | 282 38  | 30 28  | 356 05 | 198 58 |
|       | 16 356 11 | 353 39 | 345 21  | 354 33  | 284 06  | 41 25  | 357 19 | 198 26 |
|       | 26 6 07   | 1 27   | 4 17    | 14 25   | 285 21  | 51 55  | 358 33 | 197 54 |
| April | 5 15 59   | 9 13   | 24 42   | 34 34   | 286 21  | 61 46  | 359 47 | 197 22 |
|       | 15 25 48  | 16 54  | 43 21   | 50 24   | 287 05  | 70 45  | 0 58   | 196 51 |
|       | 25 35 33  | 24 31  | 55 23   | 58 06   | 287 31  | 78 31  | 2 06   | 196 19 |
| May   | 5 45 16   | 32 04  | 58 31R  | 56 58   | 287 39R | 84 29  | 3 10   | 195 47 |
|       | 15 54 56  | 39 31  | 54 13   | 51 29   | 287 28  | 87 51  | 4 09   | 195 15 |
|       | 25 64 33  | 46 53  | 49 51D  | 49 56   | 286 58  | 87 44R | 5 02   | 194 44 |
| June  | 4 74 08   | 54 10  | 51 51   | 55 30   | 286 12  | 83 46  | 5 47   | 194 12 |
|       | 14 83 42  | 61 21  | 60 42   | 67 18   | 285 12  | 77 41  | 6 25   | 193 40 |
|       | 24 93 15  | 68 27  | 75 13   | 84 23   | 284 01  | 72 58  | 6 54   | 193 08 |
| July  | 4 102 46  | 75 26  | 94 33   | 105 17  | 282 45  | 71 52D | 7 13   | 192 36 |
|       | 14 112 19 | 82 20  | 116 00  | 126 16  | 281 29  | 74 25  | 7 23   | 192 05 |
|       | 24 121 51 | 89 09  | 136 52  | 144 44  | 280 18  | 79 43  | 7 22R  | 191 33 |
| Aug.  | 3 131 25  | 95 51  | 152 53  | 160 21  | 279 17  | 86 55  | 7 11   | 191 01 |
|       | 13 141 00 | 102 24 | 167 04  | 172 57  | 278 30  | 95 27  | 6 51   | 190 29 |
|       | 23 150 38 | 108 58 | 177 51  | 181 27  | 278 00  | 104 54 | 6 22   | 189 58 |
| Sep.  | 2 160 17  | 115 22 | 183 20R | 182 55  | 277 49D | 115 02 | 5 45   | 189 26 |
|       | 12 169 60 | 121 40 | 179 54  | 174 57  | 277 56  | 125 41 | 5 03   | 188 54 |
|       | 22 179 45 | 127 51 | 170 27  | 169 04D | 278 23  | 136 44 | 4 17   | 188 22 |
| Oct.  | 2 189 34  | 133 55 | 171 44  | 177 38  | 279 07  | 148 07 | 3 31   | 187 50 |
|       | 12 199 26 | 139 50 | 185 20  | 193 45  | 280 08  | 159 45 | 2 45   | 187 19 |
|       | 22 209 22 | 145 37 | 202 19  | 210 46  | 281 24  | 171 36 | 2 04   | 186 47 |
| Nov.  | 1 219 21  | 151 13 | 219 02  | 227 07  | 282 53  | 183 37 | 1 29   | 186 15 |
|       | 11 229 23 | 156 37 | 235 01  | 242 43  | 284 35  | 195 08 | 1 02   | 185 43 |
|       | 21 239 28 | 161 11 | 250 29  | 258 04  | 286 26  | 208 04 | 0 44   | 185 12 |
| Dec.  | 1 249 35  | 166 42 | 265 31  | 272 45  | 288 26  | 220 26 | 0 36   | 184 40 |
|       | 11 259 44 | 171 16 | 279 29  | 285 11  | 290 34  | 232 52 | 0 40D  | 184 08 |
|       | 21 269 55 | 175 25 | 288 44R | 288 30  | 292 46  | 245 20 | 0 54   | 183 36 |
|       | 31 280 06 | 179 04 | 283 45  | —       | 295 03  | 257 49 | 1 18   | 183 05 |

Ayanamsa : 22° 21' 22"



1996 A.D.

# RAMAN'S EPHEMERIS Longitude of the Moon

213

| 1996  | Sun.               | Tues.                      | Thurs.                   | Sat.                      | Mon.                       | Wed.                                | Fri.                                |                                     |
|-------|--------------------|----------------------------|--------------------------|---------------------------|----------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| Jan.  | 1<br>7<br>21       | 124 13<br>314 23           | 148 14<br>343 49         | 172 46<br>11 24<br>97 18  | 198 12<br>37 09<br>121 07  | 52 43<br>225 05<br>61 37<br>145 14  | 76 39<br>253 45<br>85 27<br>169 05  | 100 25<br>283 53<br>195 06          |
| Feb.  | 1<br>11<br>25      | 221 18<br>57 48            | 248 47<br>81 58          | 277 40<br>105 43          | 307 29                     | 337 13                              | 5 45                                | 32 34                               |
| March | 1<br>3<br>17<br>31 | 141 44<br>331 16<br>149 53 | 166 28<br>359 48         | 191 58<br>27 11           | 218 16<br>53 09            | 245 26<br>77 53                     | 273 29<br>101 51                    | 117 37<br>302 15<br>125 40          |
| April | 1<br>7<br>21       | 242 07<br>73 30            | 270 17<br>97 47          | 298 42<br>121 36          | 327 02<br>145 33           | 162 18<br>354 58<br>170 14          | 187 54<br>22 09                     | 214 33<br>48 21                     |
| May   | 1<br>5<br>19       | 251 56<br>81 43            | 280 56<br>105 52         | 309 42<br>129 39          | 337 47<br>153 32<br>246 16 | 4 60<br>178 09<br>275 55            | 196 08<br>31 22<br>204 08<br>305 39 | 223 27<br>56 56<br>231 49<br>334 28 |
| June  | 1<br>9<br>23       | 361 58<br>174 03           | 28 15<br>199 11          | 53 36<br>225 56           | 78 17<br>254 35            | 102 26                              | 126 13                              | 149 57                              |
| July  | 1<br>7<br>21       | 12 00<br>182 57            | 38 07<br>208 02          | 63 06<br>234 38<br>338 40 | 87 24<br>263 05<br>7 31    | 284 41<br>111 19<br>293 07<br>34 34 | 315 02<br>135 02<br>323 39<br>60 03 | 344 20<br>158 48                    |
| Aug.  | 1<br>11<br>25      | 108 23<br>286 51           | 132 06<br>316 52         | 155 55<br>346 56          | 180 03<br>15 53            | 204 50                              | 230 40                              | 84 29<br>257 58                     |
| Sep.  | 1<br>15<br>29      | 29 45<br>201 54<br>37 44   | 56 09<br>227 37          | 81 07<br>254 21           | 105 12<br>282 15           | 128 56<br>311 10                    | 152 46<br>340 36                    | 177 01<br>9 43                      |
| Oct.  | 1<br>13<br>27      | 211 14<br>45 46            | 64 14<br>237 42<br>72 05 | 89 19<br>265 01<br>97 11  | 113 26<br>293 01           | 137 11<br>321 26                    | 161 08<br>350 00                    | 185 43<br>18 16                     |
| Nov.  | 1<br>3<br>17       | 133 13<br>318 12           | 156 59<br>346 20         | 181 19<br>13 59           | 206 45<br>41 03            | 233 28<br>67 22                     | 261 18<br>92 45                     | 109 21<br>299 44                    |
| Dec.  | 1<br>15<br>29      | 141 02<br>328 55<br>149 08 | 164 45<br>357 07         | 189 03<br>24 19           | 214 36<br>50 40            | 241 48<br>76 16                     | 270 28<br>101 10                    | 117 13<br>299 50<br>125 24          |

Ayanamsa : 22° 21' 22"

# RAMAN'S EPHEMERIS Longitudes of Planets

1997 A.D.

| 1997  | Sun | Mars   | Merc.   | Merc.   | Jupit.  | Venus   | Saturn  | Rahu   |        |
|-------|-----|--------|---------|---------|---------|---------|---------|--------|--------|
| Jan.  | 5   | 285 12 | 180 40  | 277 15R | 273 24  | 296 13  | 264 05  | 1 34   | 182 49 |
|       | 15  | 295 23 | 183 20  | 273 27  | 276 22  | 298 34  | 276 36  | 2 14   | 182 17 |
|       | 25  | 305 34 | 185 08  | 281 05  | 286 53  | 300 55  | 289 01  | 3 01   | 181 45 |
| Feb.  | 1   | 315 43 | 185 54  | 293 22  | 300 22  | 303 15  | 301 39  | 3 56   | 181 13 |
|       | 14  | 325 59 | 185 27R | 307 47  | 315 35  | 305 34  | 314 10  | 4 57   | 180 42 |
|       | 24  | 335 55 | 183 44  | 323 46  | 332 21  | 307 49  | 326 40  | 6 04   | 180 10 |
| March | 6   | 345 57 | 180 48  | 341 22  | 350 50  | 309 59  | 339 10  | 7 14   | 179 38 |
|       | 16  | 355 57 | 177 05  | 1 09    | 10 36   | 312 04  | 351 38  | 8 27   | 179 06 |
|       | 26  | 5 52   | 173 14  | 20 08   | 28 27   | 314 00  | 4 05    | 9 42   | 178 34 |
| April | 5   | 15 44  | 169 56  | 34 46   | 38 33   | 315 48  | 16 30   | 10 57  | 178 03 |
|       | 15  | 25 33  | 167 42  | 39 37R  | 38 11   | 317 25  | 28 53   | 12 11  | 177 31 |
|       | 25  | 35 19  | 166 46  | 35 13   | 31 59   | 318 49  | 41 15   | 13 24  | 176 59 |
| May   | 1   | 45 02  | 167 05D | 29 53   | 29 36D  | 320 00  | 53 35   | 14 35  | 176 27 |
|       | 15  | 54 42  | 168 33  | 31 13   | 34 33   | 320 55  | 65 53   | 15 41  | 175 56 |
|       | 25  | 64 19  | 170 57  | 39 20   | 45 24   | 321 33  | 78 09   | 16 42  | 175 24 |
| June  | 4   | 73 54  | 174 08  | 52 37   | 60 56   | 321 53  | 90 24   | 17 38  | 174 52 |
|       | 14  | 83 28  | 177 57  | 70 18   | 80 34   | 321 54R | 102 37  | 18 27  | 174 20 |
|       | 24  | 93 00  | 182 18  | 91 24   | 102 17  | 321 36  | 114 48  | 19 08  | 173 48 |
| July  | 4   | 102 33 | 187 05  | 112 42  | 122 24  | 321 00  | 126 57  | 19 41  | 173 17 |
|       | 14  | 112 05 | 192 14  | 131 18  | 139 23  | 320 07  | 139 04  | 20 04  | 172 45 |
|       | 24  | 121 37 | 197 43  | 146 39  | 153 03  | 319 01  | 151 09  | 20 18  | 172 13 |
| Aug.  | 1   | 131 11 | 203 28  | 158 27  | 162 41  | 317 47  | 163 10  | 20 21R | 171 41 |
|       | 13  | 140 46 | 209 28  | 165 24  | 166 12R | 316 29  | 175 07  | 20 14  | 171 10 |
|       | 23  | 150 23 | 215 42  | 164 41  | 161 01  | 315 13  | 186 60  | 19 57  | 170 11 |
| Sep.  | 2   | 160 03 | 222 08  | 156 26  | 153 12  | 314 05  | 198 47  | 19 31  | 170 06 |
|       | 12  | 169 45 | 228 45  | 153 10D | 156 48  | 313 09  | 210 28  | 18 55  | 169 34 |
|       | 22  | 179 31 | 235 33  | 163 10  | 171 35  | 312 30  | 222 02  | 18 15  | 169 02 |
| Oct.  | 2   | 189 20 | 242 30  | 180 29  | 189 27  | 312 08  | 233 25  | 17 30  | 168 31 |
|       | 12  | 199 12 | 249 37  | 198 12  | 206 36  | 312 07D | 244 37  | 16 43  | 167 59 |
|       | 22  | 209 07 | 256 51  | 214 53  | 222 51  | 312 26  | 255 31  | 15 56  | 167 27 |
| Nov.  | 1   | 219 06 | 264 13  | 230 36  | 238 10  | 313 03  | 266 03  | 15 13  | 166 55 |
|       | 11  | 229 08 | 271 43  | 245 32  | 252 40  | 313 59  | 276 03  | 14 35  | 166 24 |
|       | 21  | 239 12 | 279 18  | 259 28  | 265 37  | 315 11  | 285 16  | 14 05  | 165 52 |
| Dec.  | 1   | 249 20 | 284 58  | 270 34  | 273 13  | 316 38  | 293 19  | 13 44  | 165 20 |
|       | 11  | 259 29 | 294 43  | 272 01R | 266 32  | 318 17  | 299 38  | 13 33  | 164 48 |
|       | 21  | 269 39 | 302 31  | 260 09  | 257 09D | 320 08  | 303 21  | 13 33D | 164 17 |
|       | 31  | 279 51 | 310 23  | 258 12  | —       | 322 09  | 303 29R | 13 44  | 163 45 |

Ayanamsa : 22° 22' 13"

1997 A.D.

## RAMAN'S EPHEMERIS

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## Longitude of the Moon

| 1997  | Sun. | Tues.  | Thurs. | Sat.   | Mon    | Wed.   | Fri.   |
|-------|------|--------|--------|--------|--------|--------|--------|
| Jan.  | 1    |        |        |        |        | 184 46 | 209 29 |
|       | 5    | 235 47 | 263 59 | 293 42 | 323 50 | 353 11 | 47 42  |
|       | 19   | 73 11  | 97 53  | 122 03 | 145 50 | 169 27 | 193 18 |
| Feb.  | 1    |        |        | 230 47 | 257 47 | 286 42 | 316 54 |
|       | 5    | 347 16 | 16 32  | 44 07  | 70 08  | 94 57  | 119 03 |
|       | 23   | 166 26 | 190 17 | 214 40 |        |        | 142 47 |
| March | 1    |        |        | 240 01 | 266 47 | 295 12 | 324 59 |
|       | 9    | 355 14 | 24 47  | 52 46  | 79 01  | 103 52 | 127 50 |
|       | 23   | 175 13 | 199 23 | 224 14 | 243 58 | 276 46 |        |
| April | 1    |        | 290 38 | 319 13 | 348 40 | 18 13  | 46 56  |
|       | 13   | 99 53  | 124 17 | 148 01 | 171 43 | 195 54 | 220 54 |
|       | 27   | 273 40 | 301 16 |        |        |        | 246 50 |
| May   | 1    |        | 329 34 | 358 12 | 26 57  | 55 09  | 82 12  |
|       | 11   | 107 51 | 132 17 | 156 02 | 179 47 | 204 11 | 229 41 |
|       | 25   | 284 00 | 312 08 | 340 24 | 8 36   |        |        |
| June  | 1    | 22 37  | 50 21  | 77 21  | 103 18 | 128 08 | 152 05 |
|       | 15   | 199 48 | 224 55 | 251 29 | 279 27 | 304 13 | 337 04 |
|       | 29   | 33 10  |        |        |        |        | 5 27   |
| July  | 1    |        | 60 11  | 86 27  | 111 50 | 136 20 | 160 10 |
|       | 13   | 207 48 | 232 57 | 259 42 | 288 07 | 317 36 | 347 11 |
|       | 27   | 43 43  | 70 19  | 95 57  |        |        |        |
| Aug   | 1    |        |        |        |        |        | 104 27 |
|       | 3    | 132 54 | 156 46 | 180 21 | 204 04 | 228 32 | 254 21 |
|       | 17   | 311 10 | 341 19 | 11 14  | 39 59  | 67 12  | 93 01  |
|       | 31   | 141 50 |        |        |        |        | 117 47 |
| Sep.  | 1    |        |        |        | 153 42 | 177 18 | 200 57 |
|       | 7    | 225 05 | 250 08 | 276 35 | 304 45 | 334 25 | 364 46 |
|       | 21   | 63 01  | 89 39  | 114 46 | 148 53 | 162 32 |        |
| Oct.  | 1    |        |        |        |        | 186 08 | 210 02 |
|       | 5    | 234 28 | 259 42 | 286 04 | 313 48 | 342 55 | 12 55  |
|       | 19   | 71 24  | 98 16  | 123 27 | 147 31 | 171 06 | 194 49 |
| Nov.  | 1    |        |        | 231 25 | 256 46 | 282 55 | 309 57 |
|       | 9    | 337 57 | 6 52   | 36 15  | 65 16  | 93 00  | 119 05 |
|       | 23   | 167 28 | 191 07 | 215 15 | 240 18 |        |        |
| Dec.  | 1    |        |        |        | 266 20 | 293 12 | 320 40 |
|       | 7    | 348 36 | 16 55  | 45 26  | 73 39  | 100 55 | 126 51 |
|       | 21   | 175 16 | 198 57 | 223 11 | 248 14 | 275 13 | 302 57 |

Ayanamsa : 22° 22' 13"

# RAMAN'S EPHEMERIS Longitudes of Planets

1998 A.D.

| 1998  | Sun                  | Mars              | Merc.   | Merc.             | Jupit.            | Venus   | Sat.   | Rahu              |
|-------|----------------------|-------------------|---------|-------------------|-------------------|---------|--------|-------------------|
| Jan.  | 5 284 57             | 314 19            | 262 00  | 267 22            | 323 12            | 302 01R | 13 54  | 163 29            |
|       | 15 295 08            | 322 12            | 273 37  | <del>274</del> 26 | 325 23            | 296 43  | 14 21  | 162 57            |
|       | 25 305 18            | 330 05            | 287 38  | 295 09            | 327 40            | 291 05  | 14 58  | 162 25            |
| Feb.  | 4 315 28             | 337 58            | 302 57  | 311 04            | 330 01            | 288 30  | 15 43  | 161 54            |
|       | 14 325 35            | 345 <del>59</del> | 319 31  | 328 20            | 332 24            | 289 53D | 16 37  | 161 22            |
|       | 24 335 <del>11</del> | 353 39            | 337 30  | 346 59            | 334 <del>11</del> | 294 30  | 17 37  | 160 50            |
| March | 6 345 43             | 1 25              | 356 32  | 5 38              | 337 13            | 301 23  | 18 42  | 160 18            |
|       | 16 355 42            | 9 08              | 13 26   | 18 54             | 339 36            | 309 45  | 19 52  | 159 46            |
|       | 26 5 37              | 16 46             | 21 22R  | 20 40             | 341 56            | 319 09  | 21 05  | 159 15            |
| April | 5 15 30              | 24 21             | 17 35   | 13 43             | 344 12            | 329 14  | 22 20  | 158 43            |
|       | 15 25 19             | 31 50             | 10 47   | 9 48D             | 346 23            | 339 48  | 23 36  | 158 11            |
|       | 25 35 05             | 39 15             | 10 54   | 13 50             | 348 27            | 350 44  | 24 52  | 157 39            |
| May   | 5 44 48              | 46 34             | 18 15   | 23 54             | 350 23            | 1 55    | 26 06  | 157 08            |
|       | 15 54 27             | 53 49             | 30 35   | 38 15             | 352 10            | 13 17   | 27 18  | 156 36            |
|       | 25 64 05             | 60 58             | 46 49   | 56 18             | 353 46            | 24 48   | 28 27  | 156 04            |
| June  | 4 73 40              | 68 02             | 66 37   | 77 29             | 355 09            | 36 26   | 29 31  | 155 32            |
|       | 14 83 14             | 75 01             | 88 26   | 98 56             | 356 17            | 48 10   | 30 30  | 155 00            |
|       | 24 92 47             | 81 55             | 108 41  | 117 32            | 357 10            | 59 59   | 31 22  | 154 29            |
| July  | 4 102 19             | 88 44             | 125 27  | 132 25            | 357 45            | 71 52   | 32 07  | 153 57            |
|       | 14 111 51            | 95 29             | 138 22  | 143 08            | 358 02            | 83 50   | 32 44  | 153 25            |
|       | 24 121 24            | 102 09            | 146 30  | 148 09R           | 357 59R           | 95 52   | 33 12  | 152 53            |
| Aug.  | 1 130 57             | 108 45            | 147 45  | 145 17            | 357 37            | 107 58  | 33 30  | 152 22            |
|       | 13 140 32            | 115 17            | 141 24  | 137 42            | 356 56            | 120 08  | 33 37  | 151 50            |
|       | 23 150 10            | 121 44            | 135 59D | 137 21            | 355 59            | 132 23  | 33 34R | 151 18            |
| Sep.  | 2 159 <del>49</del>  | 128 08            | 141 54  | 149 03            | 354 49            | 144 41  | 33 21  | 150 46            |
|       | 12 169 31            | 134 <del>21</del> | 157 47  | 167 <del>08</del> | 353 32            | 157 03  | 32 58  | 150 14            |
|       | 22 179 17            | 140 44            | 176 28  | 185 33            | 352 12            | 169 28  | 32 26  | 149 43            |
| Oct.  | 2 189 05             | 146 55            | 194 15  | 202 36            | 350 56            | 181 55  | 31 47  | 149 11            |
|       | 12 198 57            | 153 02            | 210 37  | 218 20            | 349 50            | 194 24  | 31 02  | 148 39            |
|       | 22 208 53            | 159 05            | 225 47  | 232 57            | 348 58            | 206 55  | 30 15  | 148 07            |
| Nov.  | 1 218 51             | 165 02            | 239 47  | 246 07            | 348 24            | 219 27  | 29 27  | 147 36            |
|       | 11 <del>22</del> 53  | 170 54            | 251 40  | 255 50            | 348 10            | 232 00  | 28 42  | 147 04            |
|       | 21 238 58            | 176 39            | 257 32R | 255 23            | 348 16D           | 244 33  | 28 02  | 146 32            |
| Dec.  | 1 249 05             | 182 16            | 249 25  | 243 24            | 348 43            | 257 07  | 27 21  | 146 00            |
|       | 11 259 14            | 187 45            | 241 19D | 243 20            | 349 28            | 269 40  | 27 04  | 145 <del>27</del> |
|       | 21 <del>169</del> 24 | 193 03            | 247 55  | 253 53            | 350 32            | 282 13  | 26 49  | 144 57            |
|       | 31 279 36            | <del>194</del> 08 | 260 35  | —                 | 351 52            | 294 46  | 26 46D | 144 25            |

Ayanamsa: 22° 23' 34"

1998 A.D.

## RAMAN'S EPHEMERIS

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## Longitude of the Moon

|       | 1998 | Sun.   | Tues.  | Thurs. | Sat.   | Mon.   | Wed.   | Fri.   |
|-------|------|--------|--------|--------|--------|--------|--------|--------|
| Jan.  | 1    |        |        | 317 02 | 345 24 | 13 40  | 41 41  | 69 17  |
|       | 11   | 96 13  | 122 13 | 147 09 | 171 13 | 194 52 | 218 44 | 243 30 |
|       | 25   | 269 40 | 297 23 | 326 15 | 355 30 |        |        |        |
| Feb.  | 1    | 10 02  | 38 32  | 66 06  | 92 42  | 118 25 | 143 17 | 167 27 |
|       | 15   | 191 10 | 214 51 | 239 02 | 264 19 | 291 11 | 319 45 | 349 31 |
| March | 1    | 19 29  | 48 38  | 76 23  | 102 41 | 127 50 | 152 11 | 176 03 |
|       | 15   | 199 43 | 223 28 | 247 41 | 272 51 | 299 27 | 327 46 | 357 36 |
|       | 29   | 28 00  | 57 45  |        |        |        |        |        |
| April | 1    |        |        |        |        |        | 72 03  | 99 16  |
|       | 5    | 124 51 | 149 15 | 173 03 | 196 41 | 220 28 | 244 11 | 269 27 |
|       | 19   | 295 14 | 322 22 | 351 04 | 21 02  | 51 18  | 80 35  |        |
| May   | 1    |        |        |        |        |        |        | 108 04 |
|       | 3    | 133 44 | 158 05 | 181 48 | 205 27 | 229 27 | 253 60 | 279 13 |
|       | 17   | 305 14 | 332 17 | 0 34   | 29 56  | 59 42  | 83 46  | 116 16 |
|       | 31   | 142 02 |        |        |        |        |        |        |
| June  | 1    |        |        |        |        | 154 22 | 178 21 | 202 02 |
|       | 7    | 225 11 | 250 35 | 275 59 | 302 12 | 329 09 | 1 51   | 25 19  |
|       | 21   | 54 16  | 83 04  | 110 56 | 137 20 | 162 20 |        |        |
| July  | 1    |        |        |        |        |        | 186 23 | 210 07 |
|       | 5    | 234 12 | 259 05 | 285 03 | 311 59 | 339 39 | 7 48   | 36 10  |
|       | 19   | 64 30  | 92 25  | 119 30 | 145 27 | 170 16 | 194 17 | 218 03 |
| Aug.  | 1    |        |        |        | 230 01 | 254 32 | 280 11 | 307 10 |
|       | 9    | 335 19 | 06     | 32 55  | 61 16  | 88 52  | 115 35 | 141 23 |
|       | 23   | 166 17 | 190 27 | 214 13 | 238 03 | 262 30 |        |        |
| Sep.  | 1    |        | 275 08 | 301 32 | 329 33 | 358 50 | 28 34  | 57 45  |
|       | 13   | 85 47  | 112 30 | 136 05 | 162 50 | 187 00 | 210 47 | 234 30 |
|       | 27   | 258 31 | 283 21 |        |        |        |        |        |
| Oct.  | 1    |        |        | 309 35 | 337 35 | 7 13   | 37 36  | 67 27  |
|       | 11   | 95 41  | 122 25 | 147 38 | 171 58 | 195 51 | 219 34 | 243 11 |
|       | 25   | 267 26 | 292 12 | 318 11 | 345 11 |        |        |        |
| Nov.  | 1    | 0 22   | 30 31  | 61 06  | 90 44  | 118 30 | 144 25 | 169 00 |
|       | 15   | 192 53 | 216 34 | 240 23 | 264 32 | 289 10 | 314 34 | 341 08 |
|       | 29   | 9 15   |        |        |        |        |        |        |
| Dec.  | 1    |        | 38 51  | 69 07  | 98 47  | 126 47 | 152 55 | 177 36 |
|       | 13   | 201 28 | 225 10 | 249 09 | 273 40 | 298 48 | 324 40 | 351 25 |
|       | 27   | 19 15  | 48 08  | 77 35  |        |        |        |        |

Ayanamsa : 22° 23' 34''

# RAMAN'S EPHEMERIS Longitudes of Planets

1999 A.D.

| 1999  | Sun       | Mars    | Merc.   | Merc.   | Jupit. | Venus   | Sat.   | Rahu   |
|-------|-----------|---------|---------|---------|--------|---------|--------|--------|
| Jan.  | 5 284 41  | 200 35  | 267 41  | 275 04  | 352 37 | 301 02  | 26 11  | 144 09 |
|       | 15 294 53 | 205 16  | 282 41  | 290 30  | 354 18 | 313 33  | 27 02  | 143 37 |
|       | 25 305 04 | 209 35  | 298 32  | 306 50  | 356 09 | 326 02  | 27 25  | 143 06 |
| Feb.  | 4 315 13  | 213 29  | 315 25  | 324 18  | 358 10 | 338 30  | 27 60  | 142 34 |
|       | 14 325 20 | 216 30  | 333 24  | 342 31  | 0 19   | 350 54  | 28 43  | 142 02 |
|       | 24 335 25 | 219 30  | 351 09  | 358 20  | 2 34   | 3 15    | 29 34  | 141 30 |
| March | 6 345 28  | 221 21  | 2 54    | 3 56R   | 4 54   | 15 31   | 30 33  | 140 58 |
|       | 16 355 27 | 222 10  | 3 32    | 357 10  | 7 16   | 27 41   | 31 37  | 140 27 |
|       | 26 5 23   | 221 48R | 353 08  | 351 03D | 9 41   | 39 45   | 32 46  | 139 54 |
| April | 5 15 15   | 220 10  | 351 19  | 353 39  | 12 06  | 51 41   | 33 59  | 139 23 |
|       | 15 25 05  | 217 23  | 357 37  | 2 50    | 14 31  | 63 27   | 35 14  | 138 51 |
|       | 24 34 51  | 213 48  | 9 06    | 16 14   | 16 54  | 75 03   | 36 30  | 138 20 |
| May   | 5 44 33   | 210 08  | 24 10   | 32 54   | 19 13  | 86 26   | 37 47  | 137 48 |
|       | 15 54 13  | 207 03  | 42 46   | 52 42   | 21 29  | 97 32   | 39 03  | 137 16 |
|       | 25 63 51  | 205 05  | 63 32   | 74 29   | 23 39  | 108 18  | 40 16  | 136 44 |
| June  | 4 73 26   | 204 27D | 85 00   | 94 43   | 25 42  | 118 36  | 41 27  | 136 12 |
|       | 14 83 00  | 205 07  | 103 25  | 111 03  | 27 37  | 129 19  | 42 34  | 135 41 |
|       | 24 92 33  | 206 57  | 117 34  | 122 51  | 29 22  | 137 13  | 43 36  | 135 09 |
| July  | 4 102 05  | 209 47  | 126 11  | 129 00  | 30 56  | 144 56  | 44 32  | 134 37 |
|       | 14 111 37 | 213 25  | 129 23R | 127 49  | 32 17  | 150 57  | 45 21  | 134 05 |
|       | 24 121 10 | 217 45  | 124 45  | 121 18  | 33 23  | 154 32  | 46 01  | 133 34 |
| Aug.  | 3 130 43  | 222 37  | 118 57  | 118 54  | 34 13  | 154 44R | 46 34  | 133 02 |
|       | 13 140 18 | 227 58  | 121 38D | 127 04  | 34 46  | 151 08  | 46 56  | 132 30 |
|       | 23 149 55 | 233 43  | 134 46  | 143 55  | 34 59  | 145 11  | 47 08  | 131 58 |
| Sep.  | 2 159 35  | 239 48  | 153 40  | 163 23  | 34 52R | 140 14  | 47 10R | 131 27 |
|       | 12 169 17 | 246 11  | 172 45  | 181 41  | 34 25  | 138 50D | 47 01  | 130 55 |
|       | 22 179 02 | 252 49  | 190 11  | 198 16  | 33 40  | 146 10  | 46 42  | 130 23 |
| Oct.  | 2 188 51  | 259 40  | 205 58  | 213 18  | 32 39  | 146 25  | 46 13  | 129 51 |
|       | 12 198 43 | 266 43  | 220 16  | 226 45  | 31 25  | 153 43  | 45 36  | 129 19 |
|       | 22 208 38 | 273 56  | 232 38  | 237 32  | 30 06  | 162 25  | 44 53  | 128 48 |
| Nov.  | 1 218 37  | 281 18  | 240 52  | 241 34  | 28 45  | 172 08  | 44 06  | 128 16 |
|       | 11 228 39 | 288 46  | 238 31R | 232 19  | 27 30  | 182 34  | 43 11  | 127 44 |
|       | 21 238 43 | 296 21  | 226 55  | 225 48D | 26 26  | 193 31  | 42 31  | 127 12 |
| Dec.  | 1 248 50  | 303 60  | 228 43  | 234 02  | 25 38  | 204 51  | 41 48  | 126 41 |
|       | 11 258 59 | 311 42  | 240 34  | 247 41  | 25 09  | 216 30  | 41 11  | 126 09 |
|       | 21 269 10 | 319 26  | 250 05  | 262 39  | 25 00D | 228 21  | 40 43  | 125 37 |
|       | 31 279 21 | 328 10  | 270 15  | —       | 25 11  | 240 21  | 40 25  | 125 07 |

Ayanamsa : 22° 23' 53"

# RAMAN'S EPHEMERIS Longitude of the Moon

| 1999  | Sun.      | Tues.  | Thurs. | Sat.   | Mon.   | Wed.   | Fri.   |
|-------|-----------|--------|--------|--------|--------|--------|--------|
| Jan.  | 1         |        |        |        |        |        | 92 14  |
|       | 3 120 48  | 147 51 | 173 20 | 197 40 | 221 27 | 245 19 | 269 46 |
|       | 17 295 04 | 321 16 | 348 18 | 16 00  | 44 15  | 72 47  | 101 12 |
|       | 31 128 57 |        |        |        |        |        |        |
| Feb.  | 1         |        |        |        | 142 26 | 168 28 | 193 20 |
|       | 7 217 23  | 241 10 | 265 19 | 290 22 | 316 37 | 344 05 | 12 24  |
|       | 21 41 02  | 69 28  | 97 23  | 124 36 |        |        |        |
| March | 1         |        |        |        | 151 00 | 176 32 | 201 13 |
|       | 7 225 15  | 249 02 | 273 07 | 298 08 | 324 36 | 352 40 | 21-53  |
|       | 21 51 23  | 80 15  | 107 59 | 134 35 | 160 15 | 185 12 |        |
| April | 1         |        | 197 27 | 221 34 | 245 22 | 269 11 | 293 34 |
|       | 11 319 08 | 346 26 | 15 32  | 45 42  | 75 42  | 104 26 | 131 33 |
|       | 25 157 19 | 182 08 | 206 22 |        |        |        |        |
| May   | 1         |        |        | 230 17 | 254 02 | 277 53 | 302 15 |
|       | 7 327 42  | 354 49 | 23 49  | 54 09  | 84 34  | 113 43 | 141 04 |
|       | 23 166 48 | 191 24 | 215 24 | 239 11 | 262 59 |        |        |
| June  | 1         | 274 57 | 299 11 | 324 09 | 350 19 | 18 07  | 47 32  |
|       | 13 77 51  | 107 47 | 136 16 | 162 57 | 188 07 | 212 19 | 236 06 |
|       | 27 259 54 | 284 01 |        |        |        |        |        |
| July  | 1         |        | 308 38 | 334 00 | 0 23   | 28 02  | 56 56  |
|       | 11 86 36  | 116 04 | 144 25 | 171 12 | 201 29 | 220 44 | 244 32 |
|       | 25 268 26 | 292 49 | 317 57 | 343 58 |        |        |        |
| Aug.  | 1 357 20  | 24 42  | 52 53  | 81 38  | 110 28 | 138 48 | 166 03 |
|       | 15 191 59 | 216 44 | 240 43 | 264 31 | 288 44 | 313 51 | 340 06 |
|       | 29 7 25   | 35 29  |        |        |        |        |        |
| Sep.  | 1         |        |        |        |        | 49 40  | 78 05  |
|       | 5 106 18  | 134 05 | 161 11 | 187 20 | 212 27 | 236 42 | 260 28 |
|       | 19 284 23 | 309 05 | 335 07 | 2 38   | 31 18  | 60 22  |        |
| Oct.  | 1         |        |        |        |        |        | 89 04  |
|       | 3 166 58  | 144 03 | 170 22 | 195 55 | 220 42 | 244 47 | 268 29 |
|       | 17 292 18 | 316 55 | 343 00 | 10 53  | 40 17  | 70 12  | 99 30  |
|       | 31 127 31 |        |        |        |        |        |        |
| Nov.  | 1         |        |        |        | 141 02 | 167 14 | 192 34 |
|       | 7 217 13  | 241 21 | 265 04 | 288 42 | 312 44 | 337 51 | 4 41   |
|       | 21 33 28  | 63 40  | 94 02  | 123 19 | 150 57 |        |        |
| Dec.  | 1         |        |        |        |        | 177 03 | 202 02 |
|       | 5 226 18  | 250 09 | 273 49 | 297 31 | 321 39 | 346 42 | 13 15  |
|       | 19 41 39  | 71 36  | 102 06 | 131 50 | 159 55 | 186 14 |        |

Ayanamsa : 22° 23' 53"



# RAMAN'S EPHEMERIS Longitudes of Planets

2000 A.D.

| 2000  | Sun       | Mars   | Merc.   | Merc.   | Jupit. | Venus  | Saturn | Rahu   |
|-------|-----------|--------|---------|---------|--------|--------|--------|--------|
| Jan.  | 5 284 27  | 331 04 | 278 09  | 286 08  | 25 27  | 246 25 | 40 20R | 124 50 |
|       | 15 294 38 | 338 49 | 294 17  | 302 39  | 26 09  | 258 35 | 40 17D | 124 18 |
|       | 25 304 48 | 346 32 | 311 17  | 319 56  | 27 09  | 270 49 | 40 28  | 123 47 |
| Feb.  | 4 314 58  | 354 13 | 328 35  | 336 40  | 28 23  | 283 07 | 40 48  | 123 15 |
|       | 14 325 06 | 1 52   | 343 12  | 346 48  | 29 56  | 295 26 | 41 18  | 122 43 |
|       | 24 335 11 | 9 27   | 346 26R | 342 32  | 31 39  | 307 47 | 41 58  | 122 11 |
| March | 6 346 13  | 17 43  | 336 30  | 333 23  | 33 44  | 321 22 | 42 53  | 121 36 |
|       | 16 356 12 | 25 10  | 333 25D | 334 48  | 35 47  | 333 44 | 43 50  | 121 03 |
|       | 26 6 07   | 32 31  | 338 28  | 343 28  | 37 57  | 346 05 | 44 53  | 120 33 |
| April | 5 16 00   | 39 49  | 349 28  | 356 18  | 40 12  | 358 26 | 46 01  | 120 01 |
|       | 15 25 49  | 47 01  | 3 51    | 12 06   | 42 31  | 10 46  | 47 13  | 119 29 |
|       | 25 35 35  | 54 09  | 21 02   | 30 37   | 44 52  | 23 05  | 48 29  | 118 57 |
| May   | 5 45 17   | 61 11  | 41 03   | 51 45   | 47 14  | 35 24  | 49 45  | 118 25 |
|       | 15 54 57  | 68 09  | 62 34   | 73 24   | 49 37  | 47 42  | 51 03  | 117 52 |
|       | 25 64 34  | 75 03  | 82 16   | 90 28   | 51 59  | 59 59  | 52 19  | 117 22 |
| June  | 4 74 10   | 81 53  | 97 24   | 102 57  | 54 18  | 72 17  | 53 34  | 116 50 |
|       | 14 83 44  | 88 38  | 107 00  | 109 33  | 56 34  | 84 34  | 54 47  | 116 18 |
|       | 24 93 16  | 95 20  | 109 45R | 109 01  | 58 46  | 96 51  | 55 56  | 115 47 |
| July  | 4 102 48  | 101 59 | 105 55  | 102 54  | 60 51  | 109 08 | 57 00  | 115 15 |
|       | 14 112 20 | 108 34 | 100 48  | 100 34D | 62 51  | 121 51 | 57 59  | 114 43 |
|       | 24 121 53 | 115 06 | 102 40  | 107 08  | 64 41  | 133 44 | 58 51  | 114 11 |
| Aug.  | 3 131 27  | 121 35 | 113 48  | 122 18  | 66 21  | 146 02 | 59 35  | 113 40 |
|       | 13 141 02 | 128 02 | 131 59  | 142 07  | 67 49  | 158 19 | 60 11  | 113 08 |
|       | 23 150 39 | 134 26 | 152 07  | 163 33  | 69 04  | 170 46 | 60 37  | 112 36 |
| Sep.  | 2 160 19  | 140 59 | 170 45  | 179 17  | 70 03  | 182 53 | 60 53  | 112 04 |
|       | 12 170 01 | 147 10 | 187 20  | 194 55  | 70 45  | 195 09 | 60 59R | 111 32 |
|       | 22 179 47 | 153 27 | 202 03  | 208 40  | 71 09  | 207 23 | 60 53  | 111 01 |
| Oct.  | 2 189 35  | 159 44 | 214 40  | 219 51  | 71 13  | 219 36 | 60 37  | 110 29 |
|       | 12 199 28 | 166 00 | 223 45  | 225 43  | 70 57  | 231 47 | 60 11  | 110 00 |
|       | 22 209 23 | 172 13 | 225 16R | 220 13  | 70 22  | 243 55 | 59 37  | 109 25 |
| Nov.  | 1 219 22  | 178 54 | 214 09  | 210 13  | 69 28  | 256 02 | 58 55  | 108 54 |
|       | 11 229 24 | 184 34 | 210 58D | 215 19  | 20     | 268 05 | 58 08  | 108 22 |
|       | 21 239 29 | 190 41 | 221 37  | 228 49  | 67 03  | 280 04 | 57 20  | 107 50 |
| Dec.  | 1 249 36  | 196 46 | 236 23  | 244 06  | 65 41  | 292 07 | 56 32  | 107 18 |
|       | 11 259 45 | 202 47 | 251 51  | 259 39  | 64 22  | 303 39 | 55 47  | 106 46 |
|       | 21 269 56 | 208 45 | 267 30  | 275 25  | 63 11  | 315 10 | 55 08  | 106 15 |
|       | 31 280 08 | 214 39 | 283 28  | —       | 62 13  | 326 25 | 54 37  | 105 43 |

Ayanamsa : 22° 24' 44"

2000 A.D.

# RAMAN'S EPHEMERIS Longitude of the Moon

221

|       | 2000 | Sun.   | Tues.  | Thurs. | Sat.   | Mon.   | Wed.   | Fri.   |
|-------|------|--------|--------|--------|--------|--------|--------|--------|
| Jan.  | 1    |        |        |        | 223 18 | 247 08 | 270 48 | 294 35 |
|       | 9    | 318 45 | 343 35 | 9 26   | 36 37  | 65 16  | 95 00  | 124 57 |
|       | 23   | 154 02 | 181 32 | 207 32 | 231 58 | 255 39 |        |        |
| Feb.  | 1    |        | 267 28 | 291 10 | 315 31 | 340 32 | 6 26   | 33 14  |
|       | 13   | 61 05  | 89 34  | 118 40 | 147 39 | 175 46 | 202 28 | 227 43 |
|       | 27   | 251 52 | 276 03 |        |        |        |        |        |
| March | 1    |        |        |        |        |        | 287 25 | 311 35 |
|       | 5    | 336 40 | 2 52   | 30 01  | 57 49  | 85 58  | 114 16 | 142 30 |
|       | 19   | 170 20 | 197 18 | 223 05 | 247 42 | 271 33 | 295 13 | 319 31 |
| April | 1    |        |        |        | 332 03 | 358 10 | 25 39  | 54 02  |
|       | 9    | 82 42  | 111 04 | 138 56 | 166 14 | 192 53 | 218 27 | 243 34 |
|       | 23   | 267 37 | 291 17 | 315 09 | 339 58 |        |        |        |
| May   | 1    |        |        |        |        | 6 17   | 34 17  | 63 27  |
|       | 7    | 92 53  | 121 44 | 149 35 | 176 36 | 202 24 | 227 35 | 252 02 |
|       | 21   | 275 54 | 299 31 | 323 23 | 348 09 | 14 27  | 42 33  |        |
| June  | 1    |        |        | 57 12  | 87 10  | 117 03 | 145 53 | 173 20 |
|       | 11   | 199 27 | 224 33 | 248 54 | 272 44 | 296 21 | 320 04 | 344 22 |
|       | 25   | 9 47   | 36 48  | 65 34  |        |        |        |        |
| July  | 1    |        |        |        | 95 36  | 125 50 | 155 09 | 182 53 |
|       | 9    | 209 00 | 233 52 | 257 55 | 271 35 | 305 13 | 328 39 | 253 41 |
|       | 23   | 19 11  | 46 02  | 74 24  | 104 03 | 134 11 |        |        |
| Aug   | 1    |        | 149 04 | 177 54 | 205 01 | 230 30 | 254 47 | 278 29 |
|       | 13   | 292 08 | 326 08 | 350 44 | 16 09  | 42 30  | 69 56  | 98 28  |
|       | 27   | 127 51 | 157 22 | 186 06 |        |        |        |        |
| Sep.  | 1    |        |        |        |        |        |        | 199 55 |
|       | 3    | 226 11 | 251 07 | 275 02 | 298 39 | 322 37 | 347 20 | 12 57  |
|       | 17   | 39 27  | 66 41  | 94 33  | 123 00 | 151 47 | 180 21 | 208 00 |
| Oct.  | 1    | 234 14 | 259 05 | 283 00 | 306 39 | 330 45 | 355 49 | 22 06  |
|       | 15   | 49 24  | 77 20  | 105 30 | 133 40 | 161 44 | 189 27 | 218 24 |
|       | 29   | 242 15 | 266 57 |        |        |        |        |        |
| Nov.  | 1    |        |        |        |        |        | 278 57 | 302 37 |
|       | 5    | 326 24 | 351 22 | 16 58  | 44 24  | 72 55  | 101 50 | 130 28 |
|       | 19   | 158 31 | 186 01 | 212 24 | 238 06 | 262 55 | 286 58 |        |
| Dec.  | 1    |        |        |        |        |        |        | 310 35 |
|       | 3    | 334 19 | 358 51 | 24 45  | 52 23  | 81 28  | 111 14 | 140 40 |
|       | 17   | 169 04 | 196 12 | 222 11 | 247 13 | 271 32 | 295 16 | 318 57 |
|       | 31   | 342 38 |        |        |        |        |        |        |

Ayanamsa : 22° 24' 44"

# RAMAN'S EPHEMERIS Longitudes of Uranus on the First of each Month

| Year | Jan.   | Feb.   | Mar.   | Apr.   | May    | June   | July   | Aug.   | Sep.   | Oct.   | Nov.   | Dec.   |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1891 | 210 52 | 211 24 | 211 ■  | 210 9  | 208 53 | 207 47 | 207 18 | 207 37 | 208 41 | 210 17 | 212 12 | 213 59 |
| 1892 | 215 24 | 216 3  | 215 53 | 214 ■  | 213 44 | 212 35 | 212 00 | 212 11 | 213 10 | 214 ■  | 216 ■  | 218 26 |
| 1893 | 219 34 | 220 40 | 220 37 | 219 48 | 218 35 | 217 23 | 216 42 | 216 46 | 217 37 | 219 5  | 220 57 | 222 47 |
| 1894 | 224 21 | 225 13 | 225 17 | 224 37 | 223 26 | 222 12 | 221 24 | 221 19 | 222 5  | 223 26 | 225 16 | 227 7  |
| 1895 | 228 44 | 229 45 | 229 56 | 229 21 | 223 14 | 226 59 | 226 5  | 225 54 | 226 31 | 227 47 | 229 33 | 231 25 |
| 1896 | 233 5  | 234 11 | 234 32 | 234 1  | 233 00 | 231 42 | 230 47 | 230 28 | 230 58 | 232 ■  | 233 51 | 235 44 |
| 1897 | 237 23 | 238 39 | 239 3  | 238 42 | 237 43 | 236 27 | 235 26 | 234 59 | 235 21 | 236 27 | 238 ■  | 239 57 |
| 1898 | 241 43 | 243 00 | 243 32 | 243 19 | 242 24 | 241 9  | 240 5  | 239 32 | 239 45 | 240 44 | 242 ■  | 244 9  |
| 1899 | 245 58 | 247 21 | 247 58 | 247 52 | 247 ■  | 245 50 | 244 42 | 244 3  | 244 10 | 245 2  | 246 53 | 248 20 |
| 1900 | 250 10 | 251 38 | 252 22 | 252 23 | 251 41 | 250 29 | 249 19 | 248 34 | 248 33 | 249 18 | 250 43 | 252 29 |
| 1901 | 254 21 | 255 52 | 256 43 | 256 51 | 256 15 | 255 6  | 253 55 | 253 4  | 252 55 | 253 33 | 254 54 | 256 37 |
| 1902 | 258 29 | 260 4  | 261 00 | 261 17 | 260 47 | 259 41 | 258 29 | 257 33 | 257 17 | 257 48 | 259 2  | 260 43 |
| 1903 | 262 34 | 264 14 | 265 15 | 266 ■  | 265 15 | 264 14 | 263 12 | 262 00 | 261 33 | 262 2  | 263 10 | 264 46 |
| 1904 | 266 38 | 268 20 | 269 ■  | 269 57 | 269 39 | 268 42 | 267 30 | 266 26 | 265 58 | 266 15 | 267 19 | 268 55 |
| 1905 | 270 44 | 272 27 | 273 37 | 274 18 | 274 2  | 273 9  | 271 58 | 270 51 | 270 16 | 270 27 | 271 24 | 272 54 |
| 1906 | 274 43 | 276 29 | 277 43 | 278 26 | 278 21 | 277 34 | 276 24 | 275 15 | 274 34 | 274 38 | 275 ■  | 276 53 |
| 1907 | 278 42 | ■      | 29     | 281 47 | 282 36 | 282 38 | 281 56 | 280 49 | 279 38 | 278 51 | 278 48 | 279 32 |
| 1908 | 282 38 | 284 27 | 285 51 | 286 45 | 286 52 | 286 15 | 285 10 | 283 57 | 283 7  | 282 58 | 283 37 | 284 53 |
| 1909 | 286 37 | 288 26 | 289 50 | 290 50 | 291 4  | 290 33 | 289 31 | 288 18 | 287 23 | 287 7  | 287 39 | 288 50 |
| 1910 | 290 32 | 292 21 | 293 48 | 294 53 | 295 14 | ■      | 49     | 293 51 | 292 37 | 291 38 | 291 16 | 292 47 |
| 1911 | 294 25 | 296 14 | 297 43 | 298 54 | ■      | 21     | 299 3  | 298 8  | 296 55 | 295 53 | 295 25 | 295 42 |
| 1912 | 298 17 | 300 6  | 301 ■  | 302 54 | 303 26 | 303 13 | 302 23 | 301 10 | 300 5  | 299 23 | 299 ■  | 300 40 |
| 1913 | 302 12 | 304 00 | 305 33 | 306 52 | 307 30 | 307 23 | 306 27 | 305 27 | 304 19 | 303 41 | 303 45 | 304 33 |
| 1914 | 306 3  | 307 49 | 309 24 | 310 47 | 311 31 | 311 31 | 310 50 | 309 42 | 308 32 | 307 48 | 307 ■  | 308 ■  |
| 1915 | 309 53 | 311 38 | 313 13 | 314 40 | 315 30 | 315 37 | 315 2  | 313 55 | 312 44 | 311 56 | 311 47 | 312 24 |
| 1916 | 313 43 | 315 26 | 317 5  | 318 35 | 319 ■  | 319 41 | 319 9  | 318 5  | 316 53 | 316 1  | 315 ■  | 316 20 |
| 1917 | 317 35 | 319 16 | 320 53 | 322 25 | 323 25 | 323 43 | 323 17 | 322 16 | 321 ■  | 320 8  | 319 ■  | 320 14 |
| 1918 | 321 24 | 323 2  | 324 39 | 326 14 | 327 18 | 327 43 | 327 23 | 326 26 | 325 13 | 324 14 | 323 ■  | ■      |
| 1919 | 325 12 | 326 47 | 328 28 | 330 2  | 331 10 | 331 14 | 331 28 | 330 35 | 329 23 | 328 20 | 327 48 | 328 1  |
| 1920 | 329 00 | 330 32 | 332 11 | 333 51 | 335 ■  | 335 39 | 335 30 | 334 ■  | 333 29 | 332 24 | 331 47 | 331 36 |
| 1921 | 332 50 | 334 19 | 335 55 | 337 ■  | 338 53 | 339 34 | 339 31 | 338 47 | 337 37 | 336 30 | 335 48 | ■      |
| 1922 | 336 38 | 338 4  | 339 38 | 341 21 | 342 41 | 343 29 | 343 32 | 342 53 | 341 45 | 340 34 | 339 49 | 339 44 |
| 1923 | 340 27 | 341 ■  | 343 21 | 345 5  | 346 29 | 347 22 | 347 32 | 346 58 | 345 53 | 344 43 | 343 51 | 343 40 |
| 1924 | 344 16 | 345 33 | 347 7  | ■      | 52     | 350 ■  | 351 16 | 351 30 | 351 1  | 349 58 | 348 47 | 347 52 |
| 1925 | ■      | 7      | 349 21 | 350 50 | 352 ■  | 354 5  | 355 8  | 355 28 | 355 ■  | 354 ■  | 352 55 | 351 55 |
| 1926 | 351 58 | 353 1  | ■      | 34     | 356 19 | 357 52 | 359 00 | 359 26 | 359 9  | 358 13 | 357 ■  | 355 59 |
| 1927 | 355 50 | 356 53 | ■      | 18     | 0 3    | 1 38   | 2 51   | 3 23   | 3 12   | 2 21   | 1 11   | 0 5    |
| 1928 | ■      | 43     | 0 41   | 2 6    | ■      | 50     | 5 27   | 6 43   | 7 21   | 7 14   | 6 27   | 5 18   |
| 1929 | 3 38   | 4 32   | 5 51   | 7 35   | 9 13   | 10 34  | 11 17  | 10 35  | 9 27   | 8 16   | 7 93   | 7 51   |
| 1930 | 7 53   | 8 21   | 9 37   | 11 19  | 12 ■   | 14 24  | 15 ■   | 15 ■   | 14 42  | 13 37  | 12 25  | 11 57  |

## Longitudes of Uranus

| Year | Jan.   | Feb.   | Mar.   | Apr.   | May    | June   | July   | Aug.   | Sep    | Oct.   | Nov.   | Dec.   |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1931 | 11 29  | 12 11  | 13 22  | 15 4   | 16 45  | 17 13  | 19 8   | 19 22  | 18 50  | 17 11  | 16 34  | 15 41  |
| 1932 | 15 27  | 17 1   | 17 13  | 18 11  | 20 34  | 22 6   | 23 4   | 23 23  | 22 56  | 21 56  | 20 42  | 19 46  |
| 1933 | 19 27  | 19 57  | 21 1   | 22 39  | 24 21  | 25 56  | 26 59  | 27 24  | 27 4   | 26 7   | 24 51  | 23 52  |
| 1934 | 23 28  | 23 51  | 24 51  | 26 26  | 28 1   | 29 46  | 30 55  | 31 26  | 31 12  | 30 21  | 29 5   | 28 1   |
| 1935 | 27 30  | 27 47  | 28 42  | 30 14  | 31 56  | 33 37  | 34 50  | 35 11  | 35 21  | 34 32  | 33 11  | 32 12  |
| 1936 | 31 35  | 31 45  | 32 37  | 34 36  | 35 11  | 37 31  | 38 11  | 39 30  | 39 11  | 38 44  | 37 31  | 36 23  |
| 1937 | 35 42  | 35 46  | 36 32  | 37 57  | 39 38  | 41 22  | 42 44  | 43 33  | 43 11  | 42 58  | 41 11  | 40 38  |
| 1938 | 39 51  | 39 53  | 40 30  | 41 50  | 43 11  | 45 15  | 46 41  | 47 36  | 47 47  | 47 14  | 46 7   | 44 54  |
| 1939 | 44 2   | 43 52  | 44 27  | 45 43  | 47 23  | 48 11  | 50 38  | 51 39  | 51 58  | 51 31  | 50 11  | 49 13  |
| 1940 | 48 16  | 47 59  | 48 11  | 49 43  | 51 10  | 53 7   | 54 40  | 55 45  | 56 9   | 55 47  | 54 45  | 53 31  |
| 1941 | 52 30  | 52 2   | 52 32  | 53 41  | 55 15  | 57 3   | 58 33  | 59 50  | 60 20  | 59 11  | 58 8   | 57 54  |
| 1942 | 56 11  | 56 21  | 56 38  | 57 41  | 59 13  | 61 1   | 62 38  | 63 56  | 64 33  | 64 24  | 63 32  | 62 20  |
| 1943 | 61 10  | 60 35  | 60 46  | 61 44  | 63 12  | 64 59  | 66 39  | 67 2   | 68 46  | 68 44  | 67 57  | 66 46  |
| 1944 | 65 33  | 64 53  | 64 58  | 65 49  | 67 15  | 69 1   | 70 43  | 72 11  | 73 1   | 73 5   | 72 21  | 71 11  |
| 1945 | 69 57  | 69 13  | 69 12  | 69 57  | 71 18  | 73 3   | 74 49  | 76 19  | 77 14  | 77 11  | 76 50  | 75 41  |
| 1946 | 74 25  | 73 35  | 73 26  | 74 6   | 75 23  | 77 7   | 78 52  | 80 28  | 81 30  | 81 47  | 81 18  | 80 14  |
| 1947 | 78 56  | 78 00  | 77 45  | 78 17  | 79 29  | 81 11  | 82 58  | 84 36  | 85 45  | 86 11  | 85 48  | 84 47  |
| 1948 | 83 29  | 82 27  | 82 6   | 82 33  | 83 42  | 85 21  | 87 8   | 88 50  | 90 4   | 90 34  | 90 17  | 89 21  |
| 1949 | 87 1   | 86 57  | 86 31  | 86 50  | 87 52  | 89 30  | 91 11  | 93 00  | 94 21  | 94 59  | 94 49  | 93 57  |
| 1950 | 92 40  | 91 31  | 90 58  | 91 9   | 92 11  | 93 40  | 95 21  | 97 14  | 98 39  | 99 23  | 99 23  | 98 36  |
| 1951 | 97 21  | 96 7   | 95 28  | 95 32  | 96 23  | 97 53  | 99 38  | 101 27 | 102 57 | 103 50 | 103 56 | 103 16 |
| 1952 | 102 1  | 100 45 | 100 2  | 101 59 | 100 11 | 102 11 | 103 55 | 105 44 | 107 19 | 108 16 | 108 11 | 107 55 |
| 1953 | 106 11 | 105 26 | 104 38 | 104 11 | 105 7  | 106 28 | 108 11 | 110 2  | 111 42 | 112 49 | 113 6  | 112 35 |
| 1954 | 111 29 | 110 11 | 99 19  | 99 1   | 99 31  | 110 48 | 112 27 | 114 20 | 116 2  | 117 13 | 117 42 | 117 22 |
| 1955 | 116 18 | 114 11 | 114 1  | 113 11 | 114 00 | 115 9  | 116 46 | 118 39 | 120 24 | 121 42 | 122 19 | 122 5  |
| 1956 | 121 7  | 119 11 | 118 45 | 118 14 | 118 31 | 119 36 | 121 11 | 123 3  | 124 51 | 126 13 | 126 56 | 126 50 |
| 1957 | 125 56 | 124 37 | 123 33 | 122 55 | 123 4  | 124 5  | 125 33 | 127 24 | 129 15 | 130 41 | 131 32 | 131 34 |
| 1958 | 130 47 | 129 31 | 128 23 | 127 38 | 127 39 | 128 11 | 129 55 | 131 45 | 133 11 | 135 10 | 136 10 | 136 20 |
| 1959 | 135 39 | 134 24 | 133 15 | 132 23 | 132 17 | 133 00 | 134 20 | 136 9  | 138 11 | 139 40 | 140 11 | 141 3  |
| 1960 | 141 31 | 139 20 | 138 7  | 137 10 | 136 57 | 137 35 | 139 11 | 140 37 | 142 32 | 144 12 | 145 11 | 145 48 |
| 1961 | 145 22 | 144 15 | 143 2  | 142 00 | 141 39 | 142 11 | 143 19 | 145 3  | 146 58 | 148 41 | 150 00 | 150 32 |
| 1962 | 150 15 | 149 11 | 147 58 | 146 52 | 146 24 | 146 44 | 147 49 | 149 29 | 151 24 | 153 11 | 154 35 | 155 15 |
| 1963 | 155 5  | 154 9  | 152 57 | 151 11 | 151 11 | 151 23 | 152 21 | 153 57 | 155 51 | 157 39 | 159 11 | 159 58 |
| 1964 | 159 58 | 159 7  | 157 54 | 156 40 | 155 59 | 156 1  | 156 57 | 158 28 | 160 21 | 162 12 | 163 46 | 164 41 |
| 1965 | 164 47 | 164 1  | 162 54 | 161 37 | 160 50 | 160 47 | 161 32 | 163 11 | 164 49 | 166 41 | 168 20 | 169 22 |
| 1966 | 169 37 | 169 00 | 167 55 | 166 36 | 165 43 | 165 31 | 166 9  | 167 29 | 169 17 | 171 10 | 172 53 | 174 2  |
| 1967 | 174 26 | 173 11 | 172 54 | 171 35 | 170 37 | 170 17 | 170 47 | 172 1  | 173 46 | 175 30 | 177 26 | 178 41 |
| 1968 | 179 13 | 178 52 | 177 52 | 176 11 | 175 31 | 175 5  | 175 27 | 176 50 | 178 11 | 180 11 | 182 00 | 183 21 |
| 1969 | 183 59 | 183 45 | 182 52 | 181 11 | 180 26 | 179 53 | 180 7  | 181 11 | 182 47 | 184 39 | 186 31 | 187 57 |
| 1970 | 188 11 | 188 58 | 187 11 | 186 35 | 185 23 | 184 11 | 184 48 | 185 44 | 187 16 | 189 6  | 191 00 | 192 31 |
| 1971 | 193 11 | 193 29 | 192 48 | 191 11 | 190 20 | 190 33 | 191 31 | 190 18 | 191 45 | 193 33 | 195 28 | 197 4  |
| 1972 | 198 6  | 198 17 | 197 41 | 196 29 | 195 15 | 194 23 | 194 14 | 194 55 | 196 17 | 198 11 | 200 37 | 201 37 |
| 1973 | 202 45 | 203 11 | 202 34 | 201 27 | 200 11 | 199 13 | 198 57 | 199 29 | 200 45 | 202 28 | 204 24 | 206 6  |
| 1974 | 207 21 | 207 47 | 207 26 | 206 22 | 205 6  | 204 3  | 203 33 | 204 11 | 205 13 | 206 52 | 208 48 | 210 33 |
| 1975 | 211 54 | 212 11 | 212 14 | 211 11 | 210 1  | 209 11 | 208 11 | 208 38 | 209 41 | 211 15 | 213 10 | 214 58 |
| 1976 | 216 24 | 217 11 | 216 59 | 216 5  | 214 51 | 213 41 | 213 5  | 213 13 | 214 11 | 215 41 | 217 11 | 219 24 |
| 1977 | 220 54 | 221 11 | 221 42 | 220 55 | 219 43 | 218 11 | 217 47 | 217 48 | 218 38 | 220 11 | 221 55 | 223 45 |
| 1978 | 225 20 | 226 15 | 226 22 | 225 42 | 224 11 | 223 18 | 222 11 | 222 22 | 223 4  | 224 24 | 226 11 | 228 4  |
| 1979 | 229 43 | 230 45 | 231 0  | 230 27 | 229 21 | 228 11 | 227 11 | 226 56 | 227 11 | 228 45 | 230 31 | 232 22 |
| 1980 | 234 11 | 235 11 | 235 34 | 235 8  | 234 5  | 232 49 | 231 51 | 231 11 | 231 58 | 233 7  | 234 58 | 236 41 |

**Longitudes of Uranus**  
on the first of each month

| Year | Jan.   | Feb.   | March   | April  | May    | June   | July   | Aug.    | Sep.   | Oct.   | Nov.    | Dec.   |
|------|--------|--------|---------|--------|--------|--------|--------|---------|--------|--------|---------|--------|
| 1981 | 238 30 | 239 40 | 240 06  | 239 47 | 238 49 | 237 33 | 236 31 | 236 03D | 236 23 | 237 27 | 239 05  | 240 56 |
| 1982 | 242 43 | 244 02 | 244 36R | 244 24 | 243 31 | 242 16 | 241 10 | 240 36D | 240 48 | 241 45 | 243 20  | 245 08 |
| 1983 | 246 57 | 248 22 | 249 07R | 248 58 | 248 11 | 246 57 | 245 49 | 245 08D | 245 13 | 246 03 | 247 32  | 249 19 |
| 1984 | 251 10 | 252 39 | 253 26  | 253 28 | 252 46 | 251 34 | 250 24 | 249 38  | 249 37 | 250 21 | 251 47  | 253 32 |
| 1985 | 255 24 | 256 56 | 257 47  | 257 56 | 257 20 | 256 12 | 255 00 | 254 09  | 254 01 | 254 37 | 255 57  | 257 40 |
| 1986 | 259 32 | 261 08 | 272 05  | 262 21 | 261 52 | 260 47 | 259 34 | 258 38  | 258 22 | 258 52 | 260 06  | 261 46 |
| 1987 | 263 38 | 265 17 | 266 19  | 266 43 | 266 20 | 265 20 | 264 07 | 263 06  | 262 43 | 263 06 | 264 14  | 265 50 |
| 1988 | 267 42 | 269 24 | 270 33  | 271 03 | 270 45 | 269 48 | 268 36 | 267 32  | 267 03 | 267 20 | 268 23  | 269 56 |
| 1989 | 271 47 | 273 31 | 274 41  | 275 18 | 275 08 | 274 15 | 273 04 | 271 57  | 271 22 | 271 32 | 272 29  | 273 58 |
| 1990 | 275 47 | 277 33 | 278 48  | 279 31 | 279 27 | 278 40 | 277 31 | 276 22  | 275 40 | 275 43 | 276 33  | 277 58 |
| 1991 | 279 46 | 281 33 | 282 52  | 283 42 | 283 44 | 283 03 | 281 56 | 280 45  | 279 58 | 279 54 | 280 37  | 281 57 |
| 1992 | 283 43 | 285 31 | 286 56  | 287 50 | 287 59 | 287 22 | 286 17 | 285 04  | 284 14 | 284 04 | 284 42  | 285 51 |
| 1993 | 287 42 | 289 31 | 290 55  | 291 56 | 292 10 | 291 40 | 290 39 | 289 25  | 288 30 | 288 14 | 288 45  | 289 56 |
| 1994 | 291 37 | 293 26 | 294 53  | 295 59 | 296 21 | 295 57 | 294 59 | 293 45  | 292 46 | 292 23 | 292 47  | 293 52 |
| 1995 | 295 30 | 297 19 | 298 49  | 300 00 | 300 28 | 300 10 | 299 17 | 298 04  | 297 01 | 296 32 | 296 49  | 297 49 |
| 1996 | 299 23 | 301 11 | 302 46  | 304 01 | 304 34 | 304 21 | 303 31 | 302 19  | 301 13 | 300 40 | 300 51  | 301 47 |
| 1997 | 303 18 | 305 06 | 306 39  | 307 58 | 308 37 | 308 31 | 307 46 | 306 35  | 305 27 | 304 48 | 304 53  | 305 42 |
| 1998 | 307 09 | 308 55 | 310 30  | 311 53 | 312 38 | 312 39 | 311 59 | 310 50  | 309 40 | 308 56 | 308 53  | 309 46 |
| 1999 | 310 59 | 312 44 | 314 19  | 315 47 | 316 37 | 316 45 | 316 10 | 315 04  | 313 52 | 313 01 | 312 54  | 313 31 |
| 2000 | 314 47 | 316 29 | 318 09  | 319 39 | 320 35 | 320 48 | 320 18 | 319 15  | 318 02 | 317 10 | 316 54D | 317 25 |

# RAMAN'S EPHEMERIS Longitudes of Neptune on the First of each Month

| Year | Jan.   | Feb.   | Mar.   | Apr.   | May    | June   | July   | Aug.   | Sept.  | Oct.   | Nov.   | Dec.   |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1890 | 62 12  | 61 47  | 61 52  | 62 26  | 63 22  | 63 31  | 65 34  | 66 24  | 66 48  | 66 41  | 66 11  | 65 18  |
| 1891 | 64 30  | 64 11  | 64 5   | 64 37  | 65 32  | 66 40  | 67 44  | 68 36  | 69 2   | 68 58  | 68 25  | 67 36  |
| 1892 | 66 48  | 66 18  | 66 19  | 66 50  | 67 44  | 68 52  | 69 56  | 70 49  | 71 17  | 71 14  | 70 42  | 69 54  |
| 1893 | 69 11  | 68 34  | 68 33  | 69 2   | 69 54  | 71 1   | 72 6   | 73 00  | 73 30  | 73 30  | 73 00  | 72 13  |
| 1894 | 71 24  | 70 51  | 70 48  | 71 13  | 72 5   | 73 10  | 74 16  | 75 12  | 75 44  | 75 46  | 75 20  | 74 11  |
| 1895 | 73 42  | 73 7   | 73 2   | 73 25  | 74 14  | 75 20  | 76 26  | 77 23  | 77 58  | 78 11  | 77 37  | 76 51  |
| 1896 | 76 00  | 75 24  | 75 16  | 75 38  | 76 26  | 77 32  | 78 37  | 79 36  | 80 12  | 80 18  | 79 53  | 79 10  |
| 1897 | 78 19  | 77 41  | 77 31  | 77 51  | 78 37  | 79 40  | 80 46  | 81 46  | 82 24  | 82 34  | 82 12  | 81 27  |
| 1898 | 80 36  | 79 56  | 79 44  | 80 2   | 80 46  | 81 49  | 82 56  | 83 56  | 84 36  | 84 47  | 84 28  | 83 44  |
| 1899 | 82 54  | 82 13  | 81 59  | 82-13  | 82 55  | 83 57  | 85 4   | 86 6   | 86 48  | 87 2   | 86 44  | 86 11  |
| 1900 | 85 12  | 84 30  | 84 13  | 84 25  | 85 4   | 86 5   | 87 12  | 88 15  | 88 11  | 89 16  | 89 1   | 88 22  |
| 1901 | 87 30  | 86 45  | 86 27  | 86 37  | 87 15  | 88 14  | 89 21  | 90 25  | 91 11  | 91 29  | 91 17  | 90 40  |
| 1902 | 89 48  | 89 11  | 88 42  | 88 49  | 89 25  | 90 23  | 91 29  | 92 34  | 93 22  | 93 43  | 93 33  | 92 58  |
| 1903 | 92 6   | 91 20  | 90 57  | 91 1   | 91 34  | 92 32  | 93 37  | 94 43  | 95 33  | 95 56  | 95 49  | 95 15  |
| 1904 | 94 23  | 93 37  | 93 12  | 93 14  | 93 46  | 94 42  | 95 48  | 96 54  | 97 45  | 98 9   | 98 11  | 97 31  |
| 1905 | 96 41  | 95 53  | 95 26  | 95 26  | 95 56  | 96 51  | 97 56  | 99 3   | 99 55  | 100 22 | 100 19 | 99 48  |
| 1906 | 98 59  | 98 10  | 97 42  | 97 39  | 98 7   | 99 00  | 100 4  | 101 12 | 102 6  | 102 35 | 102 35 | 101 6  |
| 1907 | 101 17 | 100 27 | 99 58  | 99 52  | 100 18 | 101 9  | 102 13 | 103 21 | 104 16 | 104 48 | 104 50 | 104 23 |
| 1908 | 103 35 | 102 45 | 102 13 | 102 6  | 102 30 | 103 20 | 104 23 | 105 31 | 106 28 | 107 1  | 107 11 | 106 39 |
| 1909 | 105 52 | 105 1  | 104 28 | 104 19 | 104 41 | 105 29 | 106 32 | 107 40 | 108 38 | 109 11 | 109 19 | 108 56 |
| 1910 | 108 10 | 107 19 | 106 44 | 106 33 | 106 52 | 107 38 | 108 40 | 109 48 | 110 48 | 111 25 | 111 34 | 111 12 |
| 1911 | 110 27 | 109 36 | 109 00 | 108 46 | 109 2  | 109 47 | 110 48 | 111 56 | 112 57 | 113 36 | 113 48 | 113 29 |
| 1912 | 112 45 | 111 53 | 111 15 | 110 59 | 111 14 | 111 58 | 112 58 | 114 5  | 115 11 | 115 48 | 116 11 | 115 43 |
| 1913 | 115 00 | 114 9  | 113 31 | 113 13 | 113 25 | 114 7  | 115 6  | 116 14 | 117 16 | 117 59 | 118 14 | 117 59 |
| 1914 | 117 18 | 116 26 | 115 47 | 115 26 | 115 37 | 116 15 | 117 13 | 118 21 | 119 25 | 120 9  | 120 27 | 120 15 |
| 1915 | 119 35 | 118 43 | 118 3  | 117 40 | 117 47 | 118 24 | 119 21 | 120 29 | 121 33 | 122 11 | 122 40 | 122 30 |
| 1916 | 121 15 | 121 00 | 120 17 | 119 53 | 119 59 | 120 35 | 121 31 | 122 39 | 123 44 | 124 31 | 124 53 | 124 44 |
| 1917 | 124 7  | 123 16 | 122 34 | 122 7  | 122 11 | 122 45 | 123 39 | 124 46 | 125 52 | 126 41 | 127 11 | 126 59 |
| 1918 | 126 24 | 125 33 | 124 50 | 124 22 | 124 23 | 124 54 | 125 47 | 126 54 | 128 00 | 128 51 | 129 11 | 129 13 |
| 1919 | 128 40 | 127 50 | 127 6  | 126 36 | 126 35 | 127 4  | 127 55 | 128 1  | 130 8  | 131 11 | 131 30 | 131 28 |
| 1920 | 130 57 | 130 11 | 129 21 | 128 50 | 128 47 | 129 15 | 130 5  | 131 11 | 132 18 | 133 11 | 133 42 | 133 11 |
| 1921 | 132 12 | 132 23 | 131 38 | 131 11 | 130 59 | 131 24 | 132 13 | 133 18 | 134 26 | 135 20 | 135 53 | 135 56 |
| 1922 | 135 28 | 134 40 | 133 54 | 133 19 | 133 11 | 133 34 | 134 21 | 135 26 | 136 33 | 137 29 | 138 5  | 138 9  |
| 1923 | 137 43 | 136 56 | 136 11 | 135 33 | 135 23 | 135 44 | 136 29 | 137 32 | 138 41 | 139 38 | 140 15 | 140 22 |
| 1924 | 139 59 | 139 13 | 138 25 | 137 47 | 137 36 | 137 54 | 138 38 | 139 41 | 140 50 | 141 48 | 142 26 | 142 35 |
| 1925 | 142 13 | 141 27 | 140 41 | 140 1  | 139 48 | 140 11 | 140 46 | 141 48 | 142 56 | 143 55 | 144 36 | 144 47 |
| 1926 | 144 27 | 143 14 | 142 57 | 142 16 | 142 00 | 142 13 | 142 54 | 143 55 | 145 3  | 146 3  | 146 46 | 147 00 |
| 1927 | 146 11 | 145 59 | 145 13 | 144 30 | 144 11 | 144 23 | 145 1  | 146 1  | 147 9  | 148 11 | 148 55 | 149 11 |
| 1928 | 148 56 | 148 15 | 147 27 | 146 44 | 146 24 | 146 34 | 147 11 | 148 10 | 149 18 | 150 20 | 151 6  | 151 23 |
| 1929 | 151 9  | 150 29 | 149 43 | 148 58 | 148 37 | 148 44 | 149 19 | 150 17 | 151 24 | 152 27 | 153 15 | 153 35 |
| 1930 | 153 24 | 152 45 | 151 59 | 151 13 | 150 49 | 150 54 | 151 27 | 152 23 | 153 31 | 154 34 | 155 24 | 155 46 |



## Longitudes of Neptune

| Year | Jan.   | Feb.   | Mar.   | Apr.   | May    | June   | July   | Aug.   | Sept.  | Oct.   | Nov.   | Dec.   |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1931 | 155 38 | 155 2  | 154 16 | 153 29 | 153 1  | 152 14 | 151 35 | 150 58 | 150 21 | 149 34 | 148 47 | 147 59 |
| 1932 | 157 22 | 157 18 | 156 31 | 155 43 | 155 11 | 154 16 | 153 45 | 153 15 | 152 44 | 151 50 | 150 53 | 149 57 |
| 1933 | 160 5  | 159 31 | 158 47 | 157 50 | 157 29 | 157 27 | 157 54 | 158 46 | 159 53 | 160 53 | 161 52 | 162 20 |
| 1934 | 162 11 | 162 47 | 161 3  | 160 14 | 159 42 | 159 22 | 158 52 | 158 2  | 160 53 | 161 59 | 163 4  | 164 00 |
| 1935 | 164 31 | 164 1  | 163 13 | 162 29 | 161 56 | 161 49 | 162 10 | 163 00 | 164 5  | 165 11 | 166 1  | 166 40 |
| 1936 | 166 45 | 166 17 | 165 22 | 164 43 | 164 9  | 164 00 | 164 21 | 165 1  | 166 12 | 167 13 | 168 1  | 168 40 |
| 1937 | 168 57 | 168 30 | 167 48 | 166 58 | 166 22 | 166 11 | 166 22 | 167 15 | 168 18 | 169 24 | 170 24 | 171 00 |
| 1938 | 171 8  | 170 44 | 170 1  | 169 12 | 168 36 | 168 22 | 168 38 | 169 22 | 170 25 | 171 31 | 172 31 | 173 10 |
| 1939 | 173 20 | 172 48 | 172 17 | 171 27 | 170 40 | 170 22 | 170 47 | 171 28 | 172 30 | 173 36 | 174 38 | 175 18 |
| 1940 | 175 31 | 175 11 | 174 32 | 173 41 | 173 1  | 172 44 | 172 56 | 173 36 | 174 37 | 175 43 | 176 45 | 177 11 |
| 1941 | 177 41 | 177 24 | 176 41 | 175 55 | 175 15 | 174 54 | 175 5  | 175 44 | 176 41 | 177 41 | 178 41 | 179 36 |
| 1942 | 179 53 | 179 37 | 179 18 | 178 10 | 177 17 | 177 7  | 177 14 | 177 50 | 178 49 | 179 55 | 181 00 | 181 45 |
| 1943 | 182 4  | 181 51 | 181 15 | 180 22 | 179 41 | 179 19 | 179 23 | 179 57 | 180 55 | 182 1  | 183 6  | 183 41 |
| 1944 | 184 15 | 184 3  | 183 29 | 182 35 | 181 55 | 181 29 | 181 34 | 182 6  | 183 3  | 184 9  | 185 15 | 186 1  |
| 1945 | 186 16 | 186 16 | 185 43 | 184 54 | 184 1  | 183 47 | 183 43 | 184 13 | 185 9  | 186 15 | 187 21 | 188 11 |
| 1946 | 188 36 | 188 29 | 187 59 | 187 10 | 186 24 | 185 54 | 185 53 | 186 22 | 187 16 | 188 19 | 189 28 | 190 19 |
| 1947 | 190 47 | 190 40 | 190 13 | 189 24 | 188 37 | 188 8  | 188 4  | 188 30 | 189 22 | 190 28 | 191 31 | 192 27 |
| 1948 | 192 54 | 192 55 | 192 26 | 191 38 | 190 51 | 190 19 | 190 14 | 190 39 | 191 30 | 192 31 | 193 42 | 194 36 |
| 1949 | 195 7  | 195 6  | 194 40 | 193 53 | 193 5  | 193 32 | 192 24 | 192 00 | 193 36 | 194 33 | 195 47 | 196 42 |
| 1950 | 197 16 | 197 18 | 196 54 | 196 7  | 195 20 | 194 45 | 194 35 | 194 55 | 195 42 | 196 45 | 197 53 | 198 41 |
| 1951 | 199 26 | 199 30 | 199 7  | 198 17 | 197 35 | 196 58 | 196 46 | 197 3  | 197 49 | 198 51 | 199 58 | 200 56 |
| 1952 | 201 33 | 201 41 | 201 20 | 200 36 | 199 47 | 199 10 | 198 56 | 199 12 | 199 56 | 200 56 | 202 6  | 203 4  |
| 1953 | 203 42 | 203 52 | 203 33 | 202 50 | 202 2  | 201 21 | 201 1  | 201 20 | 202 1  | 203 1  | 204 12 | 205 9  |
| 1954 | 205 48 | 205 39 | 205 46 | 205 1  | 204 15 | 203 36 | 203 18 | 203 31 | 204 9  | 205 7  | 206 15 | 207 16 |
| 1955 | 208 00 | 208 15 | 208 00 | 207 15 | 206 31 | 205 41 | 205 28 | 205 37 | 206 15 | 207 14 | 208 22 | 209 24 |
| 1956 | 210 11 | 210 25 | 210 10 | 209 32 | 208 44 | 208 00 | 207 40 | 207 48 | 208 25 | 209 20 | 210 30 | 211 32 |
| 1957 | 212 18 | 212 36 | 212 24 | 211 47 | 211 00 | 210 15 | 209 52 | 209 57 | 210 32 | 211 27 | 212 31 | 213 39 |
| 1958 | 214 26 | 214 47 | 214 36 | 214 1  | 214 13 | 212 29 | 212 4  | 212 6  | 212 39 | 213 33 | 214 40 | 215 44 |
| 1959 | 216 34 | 216 57 | 216 50 | 216 15 | 215 28 | 214 42 | 214 16 | 214 17 | 214 46 | 215 46 | 216 46 | 217 45 |
| 1960 | 218 42 | 219 7  | 219 2  | 218 11 | 217 41 | 216 55 | 216 27 | 216 26 | 216 55 | 217 46 | 218 44 | 219 58 |
| 1961 | 220 51 | 221 17 | 221 14 | 220 41 | 219 55 | 219 9  | 218 39 | 218 14 | 219 1  | 219 51 | 220 51 | 222 3  |
| 1962 | 222 58 | 223 27 | 223 26 | 222 10 | 221 22 | 220 51 | 220 40 | 221 8  | 221 57 | 222 5  | 223 9  | 224 9  |
| 1963 | 224 5  | 225 36 | 225 38 | 224 11 | 223 24 | 222 37 | 222 3  | 222 34 | 223 15 | 224 3  | 225 8  | 226 15 |
| 1964 | 227 12 | 227 45 | 227 48 | 226 22 | 225 35 | 224 47 | 224 15 | 225 1  | 225 24 | 226 11 | 227 15 | 228 22 |
| 1965 | 229 20 | 229 56 | 230 00 | 228 52 | 227 58 | 227 8  | 227 27 | 227 14 | 227 32 | 228 16 | 229 19 | 230 27 |
| 1966 | 231 27 | 231 3  | 230 10 | 229 16 | 228 16 | 227 17 | 226 40 | 225 25 | 224 40 | 223 25 | 222 31 | 221 31 |
| 1967 | 233 33 | 234 12 | 234 31 | 233 4  | 232 31 | 231 31 | 230 53 | 230 35 | 231 48 | 232 29 | 233 30 | 234 35 |
| 1968 | 235 39 | 236 20 | 236 31 | 235 14 | 234 34 | 234 44 | 234 4  | 233 46 | 233 57 | 234 37 | 235 30 | 236 41 |
| 1969 | 237 48 | 238 30 | 238 11 | 237 27 | 237 36 | 237 36 | 236 18 | 235 57 | 235 15 | 236 43 | 237 43 | 238 58 |
| 1970 | 239 54 | 240 38 | 240 53 | 240 41 | 240 3  | 239 13 | 238 11 | 237 9  | 238 15 | 238 50 | 239 49 | 240 55 |
| 1971 | 242 1  | 242 47 | 243 1  | 242 53 | 242 17 | 241 28 | 240 45 | 240 20 | 240 24 | 241 57 | 242 55 | 243 1  |
| 1972 | 244 1  | 244 35 | 245 15 | 244 5  | 244 30 | 243 41 | 242 58 | 242 32 | 242 33 | 243 6  | 244 2  | 245 9  |
| 1973 | 246 13 | 247 4  | 247 25 | 246 11 | 245 43 | 245 10 | 244 31 | 244 44 | 244 44 | 245 13 | 246 11 | 247 14 |
| 1974 | 248 11 | 249 12 | 249 35 | 248 11 | 247 59 | 247 11 | 246 36 | 245 54 | 245 54 | 246 21 | 247 14 | 248 19 |
| 1975 | 250 17 | 251 20 | 251 45 | 251 43 | 251 13 | 250 26 | 249 40 | 249 8  | 249 1  | 250 20 | 251 24 | 252 32 |
| 1976 | 252 33 | 253 27 | 253 55 | 253 54 | 253 28 | 252 39 | 251 52 | 251 20 | 251 13 | 251 37 | 252 27 | 253 32 |
| 1977 | 254 40 | 255 33 | 256 1  | 255 6  | 254 53 | 254 6  | 253 32 | 253 23 | 253 44 | 254 53 | 255 53 | 256 57 |
| 1978 | 256 46 | 257 42 | 258 18 | 258 17 | 257 53 | 257 7  | 256 20 | 255 34 | 255 33 | 256 53 | 257 53 | 258 57 |
| 1979 | 258 51 | 259 49 | 260 22 | 260 29 | 260 8  | 259 22 | 258 35 | 257 57 | 257 44 | 258 58 | 259 45 | 260 55 |
| 1980 | 260 56 | 261 56 | 262 31 | 262 40 | 262 19 | 261 36 | 260 41 | 259 9  | 259 54 | 260 58 | 261 53 | 262 55 |



**Longitudes of Neptune  
on the first of each month**

| Year | Jan.   | Feb.   | March  | April  | May    | June    | July   | Aug.   | Sep.   | Oct.   | Nov.    | Dec.   |
|------|--------|--------|--------|--------|--------|---------|--------|--------|--------|--------|---------|--------|
| 1981 | 263 05 | 264 05 | 264 41 | 264 51 | 264 32 | 263 50  | 263 02 | 262 22 | 262 05 | 262 18 | 263 00  | 264 00 |
| 1982 | 265 10 | 266 12 | 266 50 | 267 03 | 266 45 | 266 05  | 265 17 | 264 36 | 264 17 | 264 27 | 265 07  | 266 07 |
| 1983 | 267 16 | 268 19 | 268 58 | 269 14 | 268 59 | 268 20  | 267 32 | 266 50 | 266 29 | 266 37 | 267 15  | 268 13 |
| 1984 | 269 22 | 270 26 | 271 09 | 271 26 | 271 12 | 270 34  | 269 46 | 269 03 | 268 40 | 268 47 | 269 24  | 270 21 |
| 1985 | 271 31 | 272 35 | 273 17 | 273 37 | 273 26 | 272 49  | 272 02 | 271 17 | 270 53 | 270 57 | 271 31  | 272 28 |
| 1986 | 273 37 | 274 42 | 275 26 | 275 48 | 275 39 | 275 04  | 274 17 | 273 32 | 273 05 | 273 07 | 273 19  | 274 34 |
| 1987 | 275 43 | 276 49 | 277 35 | 277 59 | 277 53 | 277 19  | 276 33 | 275 46 | 275 18 | 275 17 | 275 47  | 276 40 |
| 1988 | 277 49 | 278 56 | 279 45 | 280 10 | 280 05 | 279 33  | 278 46 | 278 00 | 277 30 | 277 28 | 277 56  | 278 22 |
| 1989 | 279 57 | 281 04 | 281 52 | 282 21 | 282 18 | 281 48  | 281 02 | 280 15 | 279 43 | 279 38 | 280 05  | 280 55 |
| 1990 | 282 03 | 283 11 | 284 00 | 284 31 | 284 31 | 284 02  | 283 18 | 282 29 | 281 56 | 281 49 | 282 13  | 282 37 |
| 1991 | 284 09 | 285 17 | 286 08 | 286 41 | 286 43 | 286 17  | 285 33 | 284 44 | 284 09 | 283 00 | 284 21  | 284 44 |
| 1992 | 286 15 | 287 24 | 288 18 | 288 52 | 288 55 | 288 30  | 287 47 | 286 58 | 286 22 | 286 11 | 286 31  | 287 17 |
| 1993 | 288 23 | 289 32 | 290 25 | 291 02 | 291 08 | 290 45  | 290 03 | 289 14 | 288 36 | 288 23 | 288 40  | 289 25 |
| 1994 | 290 29 | 291 39 | 292 33 | 293 12 | 293 20 | 292 59  | 292 19 | 291 29 | 290 50 | 290 35 | 290 49  | 291 32 |
| 1995 | 292 36 | 293 46 | 294 41 | 295 22 | 295 33 | 295 15  | 294 35 | 293 45 | 293 04 | 292 47 | 292 59  | 293 40 |
| 1996 | 294 42 | 295 52 | 296 51 | 297 33 | 297 45 | 297 28  | 296 49 | 295 00 | 295 18 | 294 59 | 295 10  | 295 49 |
| 1997 | 296 51 | 298 01 | 298 59 | 299 43 | 299 58 | 299 43  | 299 05 | 298 16 | 297 33 | 297 12 | 297 20  | 297 58 |
| 1998 | 298 58 | 300 08 | 301 06 | 301 52 | 302 10 | 301 57  | 301 21 | 300 32 | 299 48 | 299 25 | 299 31  | 300 06 |
| 1999 | 301 05 | 302 15 | 303 14 | 304 02 | 304 22 | 304 12  | 303 27 | 302 49 | 302 03 | 301 38 | 301 41  | 302 14 |
| 2000 | 303 11 | 304 20 | 305 22 | 306 12 | 306 34 | 306 26R | 305 53 | 305 04 | 304 18 | 303 51 | 303 52D | 304 23 |

# RAMAN'S EPHEMERIS Longitudes of Pluto on the First of each Month

| Year | Jan.   | Feb.   | Mar.   | Apr.   | May    | June   | July   | Aug.   | Sep.   | Oct.   | Nov.   | Dec.   |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1888 | 65 00  | 65 00  | 65 00  | 65 00  | 66 00  | 67 00  | 67 00  | 68 00  | 68 00  | 68 00  | 67 00  | 67 00  |
| 1891 | 66 00  | 66 00  | 66 00  | 66 00  | 67 00  | 67 00  | 68 00  | 69 00  | 69 00  | 69 00  | 68 00  | 68 00  |
| 1892 | 67 00  | 67 00  | 67 00  | 67 00  | 68 00  | 68 00  | 69 00  | 70 00  | 70 00  | 70 00  | 69 00  | 69 00  |
| 1893 | 68 00  | 68 00  | 68 00  | 68 00  | 69 00  | 69 00  | 70 00  | 71 00  | 71 00  | 71 00  | 70 00  | 70 00  |
| 1894 | 69 00  | 69 00  | 69 00  | 69 00  | 70 00  | 70 00  | 71 00  | 72 00  | 72 00  | 72 00  | 71 00  | 71 00  |
| 1895 | 70 00  | 70 00  | 70 00  | 70 00  | 71 00  | 71 00  | 72 00  | 73 00  | 73 00  | 73 00  | 72 00  | 72 00  |
| 1896 | 71 00  | 71 00  | 71 00  | 71 00  | 72 00  | 72 00  | 73 00  | 74 00  | 74 00  | 74 00  | 73 00  | 73 00  |
| 1897 | 72 00  | 72 00  | 72 00  | 72 00  | 73 00  | 73 00  | 74 00  | 75 00  | 75 00  | 75 00  | 74 00  | 74 00  |
| 1898 | 73 00  | 73 00  | 73 00  | 73 00  | 74 00  | 74 00  | 75 00  | 76 00  | 76 00  | 76 00  | 75 00  | 75 00  |
| 1899 | 74 00  | 74 00  | 74 00  | 74 00  | 75 00  | 75 00  | 76 00  | 77 00  | 77 00  | 77 00  | 76 00  | 76 00  |
| 1900 | 75 00  | 75 00  | 75 00  | 75 00  | 76 00  | 76 00  | 77 00  | 78 00  | 78 00  | 78 00  | 77 00  | 77 00  |
| 1901 | 76 00  | 76 00  | 76 00  | 76 00  | 77 00  | 77 00  | 78 00  | 79 00  | 79 00  | 79 00  | 78 00  | 78 00  |
| 1902 | 77 00  | 77 00  | 77 00  | 77 00  | 78 00  | 78 00  | 79 00  | 80 00  | 80 00  | 80 00  | 79 00  | 79 00  |
| 1903 | 78 00  | 78 00  | 78 00  | 78 00  | 79 00  | 79 00  | 80 00  | 81 00  | 81 00  | 81 00  | 80 00  | 80 00  |
| 1904 | 79 00  | 79 00  | 79 00  | 79 00  | 80 00  | 80 00  | 81 00  | 82 00  | 82 00  | 82 00  | 81 00  | 81 00  |
| 1905 | 80 00  | 80 00  | 80 00  | 80 00  | 81 00  | 81 00  | 82 00  | 83 00  | 83 00  | 83 00  | 82 00  | 82 00  |
| 1906 | 81 00  | 81 00  | 81 00  | 81 00  | 82 00  | 82 00  | 83 00  | 84 00  | 84 00  | 84 00  | 83 00  | 83 00  |
| 1907 | 82 00  | 82 00  | 82 00  | 82 00  | 83 00  | 83 00  | 84 00  | 85 00  | 85 00  | 85 00  | 84 00  | 84 00  |
| 1908 | 83 00  | 83 00  | 83 00  | 83 00  | 84 00  | 84 00  | 85 00  | 86 00  | 86 00  | 86 00  | 85 00  | 85 00  |
| 1909 | 84 00  | 84 00  | 84 00  | 84 00  | 85 00  | 85 00  | 86 00  | 87 00  | 87 00  | 87 00  | 86 00  | 86 00  |
| 1910 | 85 00  | 85 00  | 85 00  | 85 00  | 86 00  | 86 00  | 87 00  | 88 00  | 88 00  | 88 00  | 87 00  | 87 00  |
| 1911 | 86 00  | 86 00  | 86 00  | 86 00  | 87 00  | 87 00  | 88 00  | 89 00  | 89 00  | 89 00  | 88 00  | 88 00  |
| 1912 | 87 00  | 87 00  | 87 00  | 87 00  | 88 00  | 88 00  | 89 00  | 90 00  | 90 00  | 90 00  | 89 00  | 89 00  |
| 1913 | 88 00  | 88 00  | 88 00  | 88 00  | 89 00  | 89 00  | 90 00  | 91 00  | 91 00  | 91 00  | 90 00  | 90 00  |
| 1914 | 89 00  | 89 00  | 89 00  | 89 00  | 90 00  | 90 00  | 91 00  | 92 00  | 92 00  | 92 00  | 91 00  | 91 00  |
| 1915 | 90 00  | 90 00  | 90 00  | 90 00  | 91 00  | 91 00  | 92 00  | 93 00  | 93 00  | 93 00  | 92 00  | 92 00  |
| 1916 | 91 00  | 91 00  | 91 00  | 91 00  | 92 00  | 92 00  | 93 00  | 94 00  | 94 00  | 94 00  | 93 00  | 93 00  |
| 1917 | 92 00  | 92 00  | 92 00  | 92 00  | 93 00  | 93 00  | 94 00  | 95 00  | 95 00  | 95 00  | 94 00  | 94 00  |
| 1918 | 93 00  | 93 00  | 93 00  | 93 00  | 94 00  | 94 00  | 95 00  | 96 00  | 96 00  | 96 00  | 95 00  | 95 00  |
| 1919 | 94 00  | 94 00  | 94 00  | 94 00  | 95 00  | 95 00  | 96 00  | 97 00  | 97 00  | 97 00  | 96 00  | 96 00  |
| 1920 | 95 00  | 95 00  | 95 00  | 95 00  | 96 00  | 96 00  | 97 00  | 98 00  | 98 00  | 98 00  | 97 00  | 97 00  |
| 1921 | 96 00  | 96 00  | 96 00  | 96 00  | 97 00  | 97 00  | 98 00  | 99 00  | 99 00  | 99 00  | 98 00  | 98 00  |
| 1922 | 97 00  | 97 00  | 97 00  | 97 00  | 98 00  | 98 00  | 99 00  | 100 00 | 100 00 | 100 00 | 99 00  | 99 00  |
| 1923 | 98 00  | 98 00  | 98 00  | 98 00  | 99 00  | 99 00  | 100 00 | 101 00 | 101 00 | 101 00 | 100 00 | 100 00 |
| 1924 | 99 00  | 99 00  | 99 00  | 99 00  | 100 00 | 100 00 | 101 00 | 102 00 | 102 00 | 102 00 | 101 00 | 101 00 |
| 1925 | 100 00 | 100 00 | 100 00 | 100 00 | 101 00 | 101 00 | 102 00 | 103 00 | 103 00 | 103 00 | 102 00 | 102 00 |
| 1926 | 101 00 | 101 00 | 101 00 | 101 00 | 102 00 | 102 00 | 103 00 | 104 00 | 104 00 | 104 00 | 103 00 | 103 00 |
| 1927 | 102 00 | 102 00 | 102 00 | 102 00 | 103 00 | 103 00 | 104 00 | 105 00 | 105 00 | 105 00 | 104 00 | 104 00 |
| 1928 | 103 00 | 103 00 | 103 00 | 103 00 | 104 00 | 104 00 | 105 00 | 106 00 | 106 00 | 106 00 | 105 00 | 105 00 |
| 1929 | 104 00 | 104 00 | 104 00 | 104 00 | 105 00 | 105 00 | 106 00 | 107 00 | 107 00 | 107 00 | 106 00 | 106 00 |
| 1930 | 105 00 | 105 00 | 105 00 | 105 00 | 106 00 | 106 00 | 107 00 | 108 00 | 108 00 | 108 00 | 107 00 | 107 00 |

## Longitude of Pluto

| Year | Jan.   | Feb.   | Mar.   | Apr.   | May    | June   | July   | Aug.   | Sep    | Oct    | Nov.   | Dec.   |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1931 | 110 00 | 109 00 | 109 00 | 109 00 | 109 00 | 109 00 | 110 00 | 111 00 | 112 00 | 113 00 | 112 00 | 112 00 |
| 1932 | 111 00 | 111 00 | 110 00 | 110 00 | 110 00 | 111 00 | 112 00 | 113 00 | 113 00 | 114 00 | 113 00 | 113 00 |
| 1933 | 113 00 | 112 00 | 111 00 | 111 00 | 111 00 | 112 00 | 113 00 | 114 00 | 115 00 | 116 00 | 115 00 | 114 00 |
| 1934 | 114 00 | 113 00 | 113 00 | 113 00 | 113 00 | 113 00 | 114 00 | 115 00 | 116 00 | 117 00 | 117 00 | 117 00 |
| 1935 | 115 00 | 115 00 | 114 00 | 114 00 | 114 00 | 115 00 | 116 00 | 117 00 | 118 00 | 119 00 | 119 00 | 119 00 |
| 1936 | 117 00 | 116 00 | 115 00 | 115 00 | 115 00 | 116 00 | 117 00 | 118 00 | 119 00 | 120 00 | 120 00 | 120 00 |
| 1937 | 118 00 | 117 00 | 117 00 | 116 00 | 117 00 | 117 00 | 118 00 | 119 00 | 120 00 | 121 00 | 121 00 | 122 00 |
| 1938 | 119 00 | 119 00 | 118 00 | 118 00 | 118 00 | 118 00 | 119 00 | 120 00 | 121 00 | 122 00 | 123 00 | 123 00 |
| 1939 | 121 00 | 120 00 | 120 00 | 119 00 | 119 00 | 120 00 | 120 00 | 121 00 | 122 00 | 123 00 | 124 00 | 124 00 |
| 1940 | 122 00 | 122 00 | 121 00 | 121 00 | 121 00 | 121 00 | 122 00 | 123 00 | 124 00 | 125 00 | 126 00 | 126 00 |
| 1941 | 124 00 | 123 00 | 122 00 | 122 00 | 122 00 | 123 00 | 123 00 | 124 00 | 125 00 | 126 00 | 127 00 | 127 00 |
| 1942 | 125 00 | 124 00 | 124 00 | 124 00 | 124 00 | 124 00 | 125 00 | 125 00 | 126 00 | 127 00 | 128 00 | 129 00 |
| 1943 | 127 00 | 126 00 | 125 00 | 125 00 | 125 00 | 126 00 | 127 00 | 127 00 | 128 00 | 129 00 | 130 00 | 130 00 |
| 1944 | 128 00 | 128 00 | 127 00 | 126 00 | 126 00 | 127 00 | 127 00 | 128 00 | 129 00 | 130 00 | 131 00 | 132 00 |
| 1945 | 130 00 | 129 00 | 128 00 | 128 00 | 128 00 | 129 00 | 130 00 | 131 00 | 132 00 | 133 00 | 133 00 | 133 00 |
| 1946 | 131 00 | 131 00 | 130 00 | 130 00 | 129 00 | 130 00 | 131 00 | 132 00 | 133 00 | 134 00 | 134 00 | 135 00 |
| 1947 | 133 00 | 132 00 | 132 00 | 131 00 | 131 00 | 131 00 | 132 00 | 133 00 | 134 00 | 135 00 | 136 00 | 136 00 |
| 1948 | 134 00 | 134 00 | 133 00 | 133 00 | 133 00 | 133 00 | 134 00 | 135 00 | 136 00 | 137 00 | 138 00 | 138 00 |
| 1949 | 136 00 | 135 00 | 135 00 | 134 00 | 134 00 | 134 00 | 135 00 | 136 00 | 137 00 | 138 00 | 139 00 | 140 00 |
| 1950 | 138 00 | 137 00 | 136 00 | 136 00 | 136 00 | 136 00 | 137 00 | 138 00 | 139 00 | 140 00 | 141 00 | 142 00 |
| 1951 | 140 00 | 139 00 | 138 00 | 138 00 | 137 00 | 137 00 | 138 00 | 139 00 | 140 00 | 141 00 | 142 00 | 143 00 |
| 1952 | 141 00 | 141 00 | 140 00 | 139 00 | 139 00 | 139 00 | 140 00 | 141 00 | 142 00 | 143 00 | 144 00 | 145 00 |
| 1953 | 143 00 | 142 00 | 142 00 | 141 00 | 141 00 | 141 00 | 142 00 | 143 00 | 144 00 | 145 00 | 146 00 | 147 00 |
| 1954 | 145 00 | 144 00 | 143 00 | 143 00 | 143 00 | 143 00 | 144 00 | 145 00 | 146 00 | 147 00 | 148 00 | 149 00 |
| 1955 | 147 00 | 146 00 | 145 00 | 145 00 | 144 00 | 144 00 | 145 00 | 146 00 | 147 00 | 148 00 | 149 00 | 150 00 |
| 1956 | 148 00 | 148 00 | 147 00 | 146 00 | 146 00 | 146 00 | 147 00 | 148 00 | 149 00 | 150 00 | 151 00 | 152 00 |
| 1957 | 150 00 | 150 00 | 149 00 | 148 00 | 148 00 | 148 00 | 149 00 | 150 00 | 151 00 | 152 00 | 153 00 | 154 00 |
| 1958 | 152 00 | 151 00 | 151 00 | 150 00 | 150 00 | 150 00 | 151 00 | 152 00 | 153 00 | 154 00 | 155 00 | 156 00 |
| 1959 | 154 00 | 154 00 | 153 00 | 152 00 | 152 00 | 152 00 | 153 00 | 154 00 | 155 00 | 156 00 | 157 00 | 158 00 |
| 1960 | 156 00 | 156 00 | 155 00 | 154 00 | 154 00 | 154 00 | 155 00 | 156 00 | 157 00 | 158 00 | 159 00 | 160 00 |
| 1961 | 158 00 | 157 00 | 157 00 | 156 00 | 156 00 | 156 00 | 157 00 | 158 00 | 159 00 | 160 00 | 161 00 | 162 00 |
| 1962 | 160 00 | 160 00 | 159 00 | 158 00 | 157 00 | 157 00 | 158 00 | 159 00 | 160 00 | 161 00 | 162 00 | 163 00 |
| 1963 | 162 00 | 161 00 | 161 00 | 160 00 | 160 00 | 160 00 | 161 00 | 162 00 | 163 00 | 164 00 | 165 00 | 166 00 |
| 1964 | 164 00 | 164 00 | 163 00 | 162 00 | 162 00 | 162 00 | 163 00 | 164 00 | 165 00 | 166 00 | 167 00 | 168 00 |
| 1965 | 166 00 | 166 00 | 165 00 | 165 00 | 164 00 | 164 00 | 165 00 | 166 00 | 167 00 | 168 00 | 169 00 | 170 00 |
| 1966 | 169 00 | 168 00 | 168 00 | 167 00 | 166 00 | 166 00 | 167 00 | 168 00 | 169 00 | 170 00 | 171 00 | 172 00 |
| 1967 | 171 00 | 170 00 | 170 00 | 169 00 | 169 00 | 169 00 | 170 00 | 171 00 | 172 00 | 173 00 | 174 00 | 175 00 |
| 1968 | 173 00 | 173 00 | 172 00 | 171 00 | 171 00 | 171 00 | 172 00 | 173 00 | 174 00 | 175 00 | 176 00 | 177 00 |
| 1969 | 175 00 | 175 00 | 174 00 | 173 00 | 173 00 | 173 00 | 174 00 | 175 00 | 176 00 | 177 00 | 178 00 | 179 00 |
| 1970 | 177 00 | 177 00 | 177 00 | 176 00 | 175 00 | 175 00 | 176 00 | 177 00 | 178 00 | 179 00 | 180 00 | 181 00 |
| 1971 | 179 42 | 179 27 | 178 51 | 178 1  | 177 20 | 176 59 | 177 17 | 177 45 | 178 45 | 179 52 | 180 57 | 181 43 |
| 1972 | 182 3  | 181 50 | 181 14 | 180 24 | 179 42 | 179 19 | 179 26 | 180 1  | 181 2  | 182 10 | 183 16 | 184 3  |
| 1973 | 184 25 | 184 14 | 183 40 | 182 50 | 182 7  | 181 42 | 181 46 | 182 21 | 183 19 | 184 26 | 185 34 | 186 24 |
| 1974 | 186 1  | 186 41 | 185 8  | 185 19 | 184 34 | 184 6  | 184 8  | 184 40 | 185 37 | 186 45 | 187 54 | 188 46 |
| 1975 | 189 13 | 188 38 | 187 48 | 187 2  | 186 33 | 185 32 | 185 32 | 186 2  | 187 57 | 189 1  | 190 15 | 191 1  |
| 1976 | 191 39 | 191 37 | 191 7  | 190 1  | 189 31 | 189 00 | 188 1  | 189 26 | 190 21 | 191 28 | 192 39 | 193 35 |
| 1977 | 194 7  | 194 7  | 193 1  | 192 51 | 192 4  | 191 31 | 191 25 | 191 51 | 192 45 | 193 51 | 195 1  | 196 1  |
| 1978 | 196 36 | 196 39 | 196 14 | 195 26 | 194 37 | 194 3  | 194 55 | 195 17 | 196 46 | 197 36 | 198 41 | 199 55 |
| 1979 | 199 5  | 199 12 | 198 49 | 198 1  | 197 15 | 196 36 | 196 26 | 197 17 | 198 58 | 199 17 | 200 5  | 201 10 |
| 1980 | 201 36 | 201 46 | 201 25 | 200 1  | 199 49 | 199 11 | 198 58 | 199 17 | 200 5  | 201 10 | 202 24 | 203 26 |

# **Longitudes of Pluto** on the first of each month

|      | Jan.   | Feb.   | March  | April  | May    | June   | July   | Aug.   | Sep.   | Oct.   | Nov.   | Dec.   |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1981 | 204 10 | 204 20 | 204 01 | 203 17 | 202 27 | 201 47 | 201 32 | 201 48 | 202 34 | 203 38 | 204 52 | 205 57 |
| 1982 | 206 42 | 206 56 | 206 50 | 205 57 | 205 06 | 204 24 | 204 07 | 204 20 | 205 04 | 206 07 | 207 21 | 208 27 |
| 1983 | 209 15 | 209 32 | 209 18 | 208 37 | 207 47 | 207 03 | 206 43 | 206 53 | 207 34 | 208 36 | 209 50 | 210 57 |
| 1984 | 211 48 | 212 08 | 211 56 | 211 17 | 210 26 | 209 42 | 209 10 | 209 28 | 210 07 | 211 08 | 212 22 | 213 31 |
| 1985 | 214 22 | 214 44 | 214 35 | 213 57 | 213 08 | 212 22 | 211 57 | 212 02 | 212 39 | 213 38 | 214 52 | 216 01 |
| 1986 | 216 56 | 217 21 | 217 14 | 216 39 | 215 49 | 215 02 | 214 35 | 214 37 | 215 11 | 216 08 | 217 21 | 218 32 |
| 1987 | 219 28 | 219 56 | 219 53 | 219 20 | 218 31 | 217 43 | 217 13 | 217 12 | 217 43 | 218 39 | 219 51 | 221 02 |
| 1988 | 222 01 | 222 31 | 222 30 | 221 59 | 221 11 | 220 21 | 219 51 | 219 48 | 220 16 | 221 11 | 222 23 | 223 34 |
| 1989 | 224 34 | 225 07 | 225 08 | 224 39 | 223 52 | 223 02 | 222 29 | 222 23 | 222 50 | 223 42 | 224 52 | 226 04 |
| 1990 | 227 06 | 227 42 | 227 45 | 227 19 | 226 33 | 225 43 | 225 08 | 224 59 | 225 22 | 226 11 | 227 21 | 228 34 |
| 1991 | 229 37 | 230 15 | 230 21 | 229 58 | 229 14 | 228 23 | 227 46 | 227 34 | 227 54 | 228 41 | 229 50 | 231 02 |
| 1992 | 232 06 | 232 48 | 232 57 | 232 35 | 231 52 | 231 01 | 230 23 | 230 09 | 230 27 | 231 13 | 232 20 | 233 32 |
| 1993 | 234 37 | 235 20 | 235 31 | 235 12 | 234 30 | 233 39 | 233 00 | 232 43 | 232 58 | 233 41 | 234 47 | 235 59 |
| 1994 | 237 06 | 237 51 | 238 04 | 237 48 | 237 08 | 236 17 | 235 36 | 235 17 | 235 29 | 236 10 | 237 14 | 238 25 |
| 1995 | 239 33 | 240 21 | 240 37 | 240 24 | 239 46 | 238 55 | 238 13 | 237 51 | 237 00 | 238 38 | 239 40 | 240 51 |
| 1996 | 241 59 | 242 48 | 243 07 | 242 56 | 242 19 | 241 29 | 240 46 | 240 22 | 240 29 | 241 05 | 242 06 | 243 17 |
| 1997 | 244 26 | 245 16 | 245 36 | 245 27 | 244 53 | 244 03 | 243 19 | 242 53 | 242 57 | 243 31 | 244 29 | 245 39 |
| 1998 | 246 47 | 247 41 | 248 03 | 247 57 | 247 25 | 246 36 | 245 51 | 245 22 | 245 23 | 245 54 | 246 51 | 247 59 |
| 1999 | 249 08 | 250 04 | 250 28 | 250 25 | 249 54 | 249 06 | 248 21 | 247 50 | 247 49 | 248 16 | 249 11 | 250 19 |
| 2000 | 251 27 | 252 23 | 252 52 | 252 51 | 252 22 | 251 35 | 250 49 | 250 17 | 250 12 | 250 38 | 251 11 | 252 37 |

TABLE I

Sidereal Time on January 1 of each year at Ujjain at Mean Noon

| Year | Sid. Time | Year | Sid. Time | Year | Sid. Time |
|------|-----------|------|-----------|------|-----------|
| 1891 | 18 42 33  | 1921 | 18 41 30  | 1951 | 18 40 27  |
| 2    | 18 41 36  | 22   | 18 40 33  | 52   | 18 39 30  |
| 3    | 18 44 33  | 23   | 18 39 36  | 53   | 18 42 33  |
| 4    | 18 43 36  | 24   | 18 38 40  | 54   | 18 41 30  |
| 5    | 18 42 41  | 25   | 18 41 37  | 55   | 18 40 34  |
| 6    | 18 41 34  | 26   | 18 40 40  | 56   | 18 39 37  |
| 7    | 18 44 44  | 27   | 18 39 43  | 57   | 18 42 34  |
| 8    | 18 43 47  | 28   | 18 38 47  | 58   | 18 41 37  |
| 9    | 18 42 50  | 29   | 18 41 44  | 59   | 18 40 41  |
| 1900 | 18 41 53  | 1930 | 18 40 47  | 1960 | 18 39 44  |
| 1    | 18 40 56  | 31   | 18 39 50  | 61   | 18 42 41  |
| 2    | 18 39 59  | 32   | 18 38 54  | 62   | 18 41 44  |
| 3    | 18 38 2   | 33   | 18 41 51  | 63   | 18 40 48  |
| 4    | 18 38 5   | 34   | 18 40 54  | 64   | 18 39 51  |
| 5    | 18 41 2   | 35   | 18 39 57  | 65   | 18 42 48  |
| 6    | 18 40 5   | 36   | 18 39 1   | 66   | 18 41 51  |
| 7    | 18 39 8   | 37   | 18 41 58  | 67   | 18 40 55  |
| 8    | 18 38 12  | 38   | 18 41 1   | 68   | 18 39 58  |
| 9    | 18 41 9   | 39   | 18 40 4   | 69   | 18 42 52  |
| 1910 | 18 40 12  | 1940 | 18 39 8   | 1970 | 18 41 55  |
| 11   | 18 39 15  | 41   | 18 42 6   | 71   | 18 41 2   |
| 12   | 18 38 19  | 42   | 18 41 9   | 72   | 18 40 5   |
| 13   | 18 41 16  | 43   | 18 40 12  | 73   | 18 43 2   |
| 14   | 18 40 12  | 44   | 18 39 15  | 74   | 18 42 5   |
| 15   | 18 39 22  | 45   | 18 42 13  | 75   | 18 41 9   |
| 16   | 18 38 28  | 46   | 18 41 16  | 76   | 18 40 12  |
| 17   | 18 41 23  | 47   | 18 40 20  | 77   | 18 43 1   |
| 18   | 18 40 25  | 48   | 18 39 23  | 78   | 18 42 12  |
| 19   | 18 39 28  | 49   | 18 42 20  | 79   | 18 41 16  |
| 20   | 18 38 31  | 50   | 18 41 23  | 80   | 18 40 19  |

\* By adding 51 seconds, Sidereal Time at G.M.N. (Greenwich Mean Noon) is obtained.

Example: 1-1-1926: From Table 18-40-40 adding 51s. we get  
18-41-31 = S.T. = G.M.N.

**TABLE II**  
Date-wise motion in Sidereal Time

| Date | January |    |    | February |    |    | March |    |    | April |    |    | May |    |    | June |    |    |
|------|---------|----|----|----------|----|----|-------|----|----|-------|----|----|-----|----|----|------|----|----|
|      | hr      | m  | s  | hr       | m  | s  | hr    | m  | s  | hr    | m  | s  | hr  | m  | s  | hr   | m  | s  |
| 1    | 0       | 0  | 0  | 2        | 2  | 13 | 3     | 52 | 37 | 5     | 54 | 50 | 7   | 53 | 7  | 9    | 55 | 21 |
| 2    | 0       | 3  | 57 | 2        | 6  | 9  | 3     | 56 | 33 | 5     | 58 | 47 | 7   | 57 | 4  | 9    | 59 | 17 |
| 3    | 0       | 7  | 53 | 2        | 10 | 6  | 4     | 0  | 30 | 6     | 2  | 43 | 8   | 1  | 0  | 10   | 3  | 14 |
| 4    | 0       | 11 | 50 | 2        | 14 | 2  | 4     | 4  | 26 | 6     | 6  | 40 | 8   | 5  | 57 | 10   | 7  | 10 |
| 5    | 0       | 15 | 46 | 2        | 17 | 59 | 4     | 8  | 23 | 6     | 10 | 36 | 8   | 8  | 53 | 10   | 11 | 7  |
| 6    | 0       | 19 | 43 | 2        | 21 | 55 | 4     | 12 | 19 | 6     | 14 | 33 | 8   | 12 | 50 | 10   | 15 | ■  |
| 7    | 0       | 23 | 39 | 2        | 25 | 52 | 4     | 16 | 16 | 6     | 18 | 29 | 8   | 16 | 46 | 10   | 19 | ■  |
| 8    | 0       | 27 | 36 | 2        | 29 | 48 | 4     | 20 | 12 | 6     | 22 | 26 | 8   | 20 | 43 | 10   | 23 | ■  |
| 9    | 0       | 31 | 32 | 2        | 33 | 45 | 4     | 24 | 9  | 6     | 26 | 22 | 8   | 24 | 39 | 10   | 26 | 53 |
| 10   | 0       | 35 | 29 | 2        | 37 | 42 | 4     | 28 | 5  | 6     | 30 | 19 | 8   | 28 | 36 | 10   | 30 | 49 |
| 11   | 0       | 39 | 25 | 2        | 41 | 39 | 4     | 32 | 2  | 6     | 34 | 16 | 8   | 32 | 32 | 10   | 34 | 44 |
| 12   | 0       | 43 | 22 | 2        | 45 | 35 | 4     | 35 | 59 | 6     | 38 | 13 | 8   | 36 | 29 | 10   | 38 | 41 |
| 13   | 0       | 47 | 18 | 2        | 49 | 32 | 4     | 39 | 56 | 6     | 42 | 9  | 8   | 40 | 25 | 10   | 42 | 39 |
| 14   | 0       | 51 | 18 | 2        | 53 | 28 | 4     | 43 | 52 | 6     | 46 | 6  | 8   | 44 | 22 | 10   | 46 | 35 |
| 15   | 0       | 55 | 12 | 2        | 57 | 25 | 4     | 47 | 49 | 6     | 50 | 2  | 8   | 48 | 18 | 10   | 50 | 31 |
| 16   | 0       | 59 | 8  | 3        | 1  | 21 | 4     | 51 | 45 | 6     | 53 | 59 | 8   | 52 | 15 | 10   | 54 | 28 |
| 17   | 1       | 3  | 4  | 3        | 5  | 18 | 4     | 55 | 42 | 6     | 57 | 55 | 8   | 56 | 11 | 10   | 58 | 25 |
| 18   | 1       | 7  | 1  | 3        | 9  | 14 | 4     | 59 | 38 | 7     | 1  | 52 | 9   | 0  | 8  | 11   | 2  | 21 |
| 19   | 1       | 10 | 57 | 3        | 13 | 11 | 5     | 3  | 35 | 7     | 5  | 48 | 9   | 4  | 4  | 11   | 6  | 18 |
| 20   | 1       | 14 | 54 | 3        | 17 | 8  | 5     | 7  | 31 | 7     | 9  | 45 | 9   | 11 | 1  | 11   | 10 | 15 |
| 21   | 1       | 18 | 51 | 3        | 21 | 5  | 5     | 11 | 28 | 7     | 13 | 41 | 9   | 11 | 58 | 11   | 14 | 12 |
| 22   | 1       | 22 | 48 | 3        | 25 | 1  | 5     | 15 | 25 | 7     | 17 | 38 | 9   | 15 | 55 | 11   | 18 | 8  |
| 23   | 1       | 26 | 44 | 3        | 28 | 58 | 5     | 19 | 22 | 7     | 21 | 34 | 9   | 19 | 51 | 11   | 22 | ■  |
| 24   | 1       | 30 | 41 | 3        | 32 | 54 | 5     | 23 | 18 | 7     | 25 | 31 | 9   | 23 | 48 | 11   | 26 | 1  |
| 25   | 1       | 34 | 37 | 3        | 36 | 51 | 5     | 27 | 15 | 7     | 29 | 28 | 9   | 27 | 44 | 11   | 29 | 58 |
| 26   | 1       | 38 | 34 | 3        | 40 | 47 | 5     | 31 | 11 | 7     | 33 | 24 | 9   | 31 | 41 | 11   | 33 | 54 |
| 27   | 1       | 42 | 30 | 3        | 44 | 44 | 5     | 35 | 8  | 7     | 37 | 20 | 9   | 35 | 37 | 11   | 37 | 51 |
| 28   | 1       | 46 | 27 | 3        | 48 | 40 | 5     | 39 | 5  | 7     | 41 | 17 | 9   | 39 | 34 | 11   | 41 | 47 |
| 29   | 1       | 50 | 23 |          |    |    | 5     | 43 | 1  | 7     | 45 | 13 | 9   | 43 | 30 | 11   | 45 | 44 |
| 30   | 1       | 54 | 20 |          |    |    | 5     | 48 | 58 | 7     | 49 | 10 | 9   | 47 | 27 | 11   | 49 | 41 |
| 31   | 1       | 58 | 16 |          |    |    | 5     | 50 | 54 |       |    |    | 9   | 51 | 24 |      |    |    |

TABLE II (contd.)  
Date-wise motion in Sidereal Time

| Date | July |    |    | August |    |    | September |    |    | October |    |    | November |    |    | December |    |    |
|------|------|----|----|--------|----|----|-----------|----|----|---------|----|----|----------|----|----|----------|----|----|
|      | hr   | m  | s  | hr     | m  | s  | hr        | m  | s  | hr      | m  | s  | hr       | m  | s  | hr       | m  | s  |
| 1    | 11   | 44 | 38 | 13     | 55 | 50 | 15        | 58 | 4  | 17      | 44 | 21 | 19       | 58 | 34 | 21       | 56 | 50 |
| 2    | 11   | 57 | 34 | 13     | 59 | 47 | 16        | 2  | 0  | 18      | 0  | 17 | 20       | 2  | 31 | 22       | 0  | 47 |
| 3    | 12   | 1  | 31 | 14     | 3  | 44 | 16        | 5  | 57 | 18      | 4  | 14 | 20       | 6  | 27 | 22       | 4  | 44 |
| 4    | 12   | 5  | 27 | 14     | 7  | 40 | 16        | 9  | 53 | 18      | 8  | 10 | 20       | 10 | 24 | 22       | 8  | 40 |
| 5    | 12   | 9  | 24 | 14     | 11 | 36 | 16        | 13 | 50 | 18      | 12 | 7  | 20       | 14 | 20 | 22       | 12 | 36 |
| 6    | 12   | 13 | 21 | 14     | 15 | 33 | 16        | 17 | 46 | 18      | 16 | 3  | 20       | 18 | 17 | 22       | 16 | 33 |
| 7    | 12   | 17 | 17 | 14     | 19 | 29 | 16        | 21 | 43 | 18      | 20 | 0  | 20       | 22 | 13 | 22       | 20 | 30 |
| 8    | 12   | 21 | 14 | 14     | 23 | 26 | 16        | 25 | 40 | 18      | 23 | 57 | 20       | 26 | 10 | 22       | 24 | 27 |
| 9    | 12   | 25 | 10 | 14     | 27 | 13 | 16        | 29 | 37 | 18      | 27 | 54 | 20       | 30 | 6  | 22       | 28 | 23 |
| 10   | 12   | 29 | 6  | 14     | 31 | 20 | 16        | 33 | 33 | 18      | 31 | 50 | 20       | 34 | 3  | 22       | 32 | 20 |
| 11   | 12   | 33 | 3  | 14     | 35 | 16 | 16        | 37 | 30 | 18      | 35 | 47 | 20       | 38 | 0  | 22       | 36 | 16 |
| 12   | 12   | 36 | 59 | 14     | 39 | 13 | 16        | 41 | 26 | 18      | 38 | 43 | 20       | 41 | 56 | 22       | 40 | 13 |
| 13   | 12   | 40 | 50 | 14     | 43 | 9  | 16        | 45 | 19 | 18      | 43 | 40 | 20       | 45 | 52 | 22       | 44 | 9  |
| 14   | 12   | 44 | 42 | 14     | 47 | 6  | 16        | 49 | 19 | 18      | 47 | 37 | 20       | 49 | 49 | 22       | 48 | 6  |
| 15   | 12   | 48 | 49 | 14     | 51 | 2  | 16        | 53 | 16 | 18      | 51 | 33 | 20       | 53 | 45 | 22       | 52 | 2  |
| 16   | 12   | 52 | 45 | 14     | 55 | 29 | 16        | 57 | 12 | 18      | 55 | 30 | 20       | 57 | 42 | 22       | 56 | 59 |
| 17   | 12   | 56 | 42 | 14     | 58 | 55 | 17        | 1  | 5  | 18      | 59 | 26 | 21       | 1  | 39 | 22       | 59 | 55 |
| 18   | 13   | 0  | 38 | 15     | 2  | 52 | 17        | 5  | 5  | 19      | 3  | 22 | 21       | 5  | 36 | 23       | 3  | 52 |
| 19   | 13   | 4  | 35 | 15     | 6  | 48 | 17        | 9  | 2  | 19      | 7  | 19 | 21       | 9  | 32 | 23       | 7  | 49 |
| 20   | 13   | 8  | 32 | 15     | 10 | 45 | 17        | 12 | 55 | 19      | 11 | 15 | 21       | 13 | 29 | 23       | 11 | 46 |
| 21   | 13   | 12 | 29 | 15     | 14 | 41 | 17        | 16 | 52 | 19      | 15 | 12 | 21       | 17 | 25 | 23       | 15 | 42 |
| 22   | 13   | 16 | 25 | 15     | 18 | 38 | 17        | 20 | 51 | 19      | 19 | 8  | 21       | 21 | 22 | 23       | 19 | 39 |
| 23   | 13   | 20 | 22 | 15     | 22 | 34 | 17        | 24 | 48 | 19      | 23 | 5  | 21       | 25 | 18 | 23       | 23 | 36 |
| 24   | 13   | 24 | 18 | 15     | 26 | 31 | 17        | 28 | 44 | 19      | 27 | 1  | 21       | 29 | 15 | 23       | 27 | 32 |
| 25   | 13   | 28 | 15 | 15     | 30 | 27 | 17        | 32 | 41 | 19      | 30 | 58 | 21       | 33 | 11 | 23       | 31 | 00 |
| 26   | 13   | 32 | 11 | 15     | 34 | 24 | 17        | 36 | 37 | 19      | 34 | 54 | 21       | 37 | 8  | 23       | 35 | 25 |
| 27   | 13   | 36 | 8  | 15     | 38 | 20 | 17        | 40 | 34 | 19      | 38 | 51 | 21       | 41 | 4  | 23       | 39 | 21 |
| 28   | 13   | 40 | 4  | 15     | 42 | 17 | 17        | 44 | 31 | 19      | 42 | 48 | 21       | 45 | 1  | 23       | 43 | 18 |
| 29   | 13   | 44 | 1  | 15     | 46 | 14 | 17        | 48 | 28 | 19      | 46 | 45 | 21       | 49 | 57 | 23       | 47 | 14 |
| 30   | 13   | 48 | 57 | 15     | 50 | 11 | 17        | 52 | 24 | 19      | 50 | 41 | 21       | 52 | 57 | 23       | 51 | 11 |
| 31   | 13   | 51 | 54 | 15     | 54 | 7  | 17        | 56 | 20 | 19      | 54 | 35 | 21       | 56 | 54 | 23       | 55 | 7  |

Note:—In case of leap year, sidereal motion for the date next to that in question should be taken after 28th February.



TABLE III

## Tables of Houses—Sayana

| Sid. T. | 0°    | 10°   | 20°   | 30°   | 40°   | 50°   | 60°   | Tenth<br>House<br>For all<br>Lats. |
|---------|-------|-------|-------|-------|-------|-------|-------|------------------------------------|
| H.M.    | ☾     | ☾     | ☾     | ☾     | ☾     | ☾     | ☾     | ☾                                  |
| 0 0     | 0 0   | 4 1   | 8 14  | 12 56 | 18 28 | 25 22 | 4 34  | 0 0                                |
| 0 16    | 3 40  | 7 40  | 11 49 | 16 24 | 21 45 | 28 21 | 7 3   | 4 22                               |
| 0 32    | 7 21  | 11 18 | 15 23 | 19 51 | 24 59 | 1 17  | 9 31  | 8 43                               |
| 0 48    | 11 2  | 14 56 | 18 56 | 23 16 | 28 12 | 4 12  | 11 58 | 13 3                               |
| 1 4     | 14 44 | 18 35 | 22 29 | 26 40 | 1 24  | 7 6   | 14 25 | 17 22                              |
| 1 20    | 18 28 | 22 13 | 26 1  | 0 3   | 4 34  | 9 59  | 16 52 | 21 38                              |
| 1 36    | 22 13 | 25 53 | 29 32 | 3 25  | 7 44  | 12 51 | 19 18 | 25 53                              |
| 1 52    | 26 0  | 29 40 | 3 6   | 6 48  | 10 53 | 15 42 | 21 45 | 0 6                                |
| 2 8     | 29 50 | 3 16  | 6 39  | 10 10 | 14 2  | 18 33 | 24 11 | 4 16                               |
| 2 24    | 3 41  | 6 59  | 10 13 | 13 33 | 17 11 | 21 24 | 26 38 | 8 23                               |
| 2 40    | 7 35  | 10 45 | 13 48 | 16 56 | 20 20 | 24 15 | 29 5  | 12 27                              |
| 2 56    | 11 32 | 14 31 | 17 24 | 20 19 | 23 28 | 27 5  | 1 32  | 16 28                              |
| 3 12    | 15 32 | 18 20 | 21 1  | 23 43 | 26 37 | 29 56 | 3 59  | 20 26                              |
| 3 28    | 19 35 | 22 11 | 24 39 | 27 8  | 29 47 | 2 47  | 6 27  | 24 22                              |

TABLE III—(contd.)

## Tables of Houses—Sayana

| H.M. -<br>Sid. T. | 0°    | 10°   | 20°   | 30°   | 40°   | 50°   | 60°   | Tenth<br>House<br>For all<br>Lat. |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-----------------------------------|
|                   | ♌     | ♌     | ♌     | ♍     | ♍     | ♍     | ♍     | ♎                                 |
| 3 44              | 23 41 | 26 3  | 28 18 | 0 33  | 2 56  | 5 38  | 8 55  | 28 15                             |
|                   |       |       | ♍     |       |       |       |       | ♎                                 |
| 4 00              | 27 49 | 29 58 | 1 58  | 3 59  | 6 6   | 8 29  | 11 23 | 2 5                               |
|                   | ♍     | ♍     |       |       |       |       |       |                                   |
| 4 16              | 2 00  | 3 54  | 5 40  | 7 25  | 9 16  | 11 21 | 13 51 | 5 54                              |
| 4 32              | 6 14  | 7 52  | 9 23  | 10 53 | 12 27 | 14 13 | 16 20 | 9 40                              |
| 4 48              | 10 30 | 11 51 | 13 06 | 14 20 | 15 38 | 17 5  | 18 48 | 13 24                             |
| 5 4               | 14 48 | 15 52 | 16 51 | 17 49 | 18 49 | 19 57 | 21 18 | 17 7                              |
| 5 20              | 19 7  | 19 53 | 20 36 | 21 17 | 22 1  | 22 49 | 23 47 | 20 49                             |
| 5 36              | 23 28 | 23 56 | 24 21 | 24 46 | 25 12 | 25 41 | 26 16 | 24 30                             |
| 5 52              | 27 49 | 27 59 | 28 7  | 28 15 | 28 24 | 28 34 | 28 45 | 28 10                             |
|                   | ♎     | ♎     | ♎     | ♎     | ♎     | ♎     | ♎     | ♏                                 |
| 6 8               | 2 11  | 2 2   | 1 53  | 1 45  | 1 36  | 1 26  | 1 15  | 1 50                              |
| 6 24              | 6 32  | 6 4   | 5 39  | 5 14  | 4 48  | 4 19  | 3 44  | 5 30                              |
| 6 40              | 10 53 | 10 7  | 9 24  | 8 43  | 7 59  | 7 11  | 6 13  | 9 11                              |
| 6 56              | 15 12 | 14 8  | 13 9  | 12 11 | 11 11 | 10 3  | 8 43  | 12 53                             |
| 7 12              | 19 30 | 18 9  | 16 54 | 15 40 | 14 22 | 12 55 | 11 12 | 16 36                             |
| 7 28              | 23 46 | 22 20 | 20 37 | 19 7  | 17 33 | 15 47 | 13 40 | 20 20                             |
| 7 44              | 28 00 | 26 6  | 24 20 | 22 35 | 20 44 | 18 39 | 16 9  | 24 6                              |
|                   | ♏     | ♏     |       |       |       |       |       |                                   |
| 8 00              | 2 11  | 0 2   | 2 28  | 2 26  | 1 23  | 54 21 | 31 18 | 37 27                             |
|                   |       |       | ♏     |       |       |       |       | ♏                                 |
| 8 16              | 6 19  | 3 57  | 1 42  | 29 27 | 27 4  | 24 22 | 21 6  | 1 45                              |
|                   |       |       | ♏     | ♏     |       |       |       |                                   |
| 8 32              | 10 25 | 7 49  | 5 21  | 2 52  | 0 13  | 27 13 | 23 33 | 5 38                              |
|                   |       |       |       |       | ♏     |       |       |                                   |
| 8 48              | 14 28 | 11 40 | 8 59  | 6 17  | 3 23  | 0 4   | 26 1  | 9 34                              |
| 9 4               | 18 27 | 15 29 | 12 36 | 9 41  | 6 32  | 2 55  | 28 28 | 13 32                             |
|                   |       |       |       |       |       | ♏     |       |                                   |
| 9 20              | 22 25 | 19 16 | 16 12 | 13 4  | 9 40  | 5 45  | 0 55  | 17 33                             |
| 9 36              | 26 19 | 23 1  | 19 47 | 16 27 | 12 49 | 8 36  | 3 22  | 21 37                             |
|                   |       |       |       |       |       |       |       |                                   |
| 9 52              | 0 11  | 26 44 | 23 21 | 19 50 | 15 58 | 11 27 | 5 49  | 25 44                             |
|                   |       | ♏     |       |       |       |       |       |                                   |
| 10 8              | 4 00  | 0 26  | 26 54 | 23 12 | 19 7  | 14 18 | 8 15  | 29 54                             |

## TABLE III—(contd.)

## Tables of Houses—Sayana

| Sid T. | 0°    | 10°   | 20°   | 30°   | 40°   | 50°   | 60°   | Tenth<br>House<br>For all<br>Lat. |
|--------|-------|-------|-------|-------|-------|-------|-------|-----------------------------------|
| H.M.   | †     | †     | †     | m     | m     | m     | m     |                                   |
| 10 24  | 7 47  | 4 7   | 0 27  | 26 35 | 22 16 | 17 9  | 10 42 | 4 7                               |
| 10 40  | 11 32 | 7 47  | 3 59  | 29 57 | 25 26 | 20 1  | 13 9  | 22                                |
| 10 56  | 15 16 | 11 26 | 7 31  | 3 21  | 28 36 | 22 54 | 15 35 | 12 39                             |
| 11 12  | 18 58 | 15 4  | 11 4  | 6 44  | 1 48  | 25 48 | 18 1  | 16 57                             |
| 11 28  | 22 39 | 18 42 | 14 37 | 10 9  | 5 1   | 28 43 | 20 29 | 21 17                             |
| 11 44  | 26 20 | 22 21 | 18 11 | 13 36 | 8 15  | 1 39  | 22 57 | 25 38                             |
| 12 00  | 0 00  | 25 59 | 21 46 | 17 4  | 11 32 | 4 38  | 25 26 | 0 00                              |
| 12 16  | 3 40  | 29 39 | 25 22 | 20 34 | 14 52 | 7 39  | 27 57 | 4 22                              |
| 12 32  | 7 21  | 3 20  | 29 1  | 24 7  | 18 14 | 10 43 | 0 27  | 8 43                              |
| 12 48  | 11 2  | 7 2   | 2 41  | 27 43 | 21 41 | 13 51 | 3 00  | 13 3                              |
| 13 4   | 14 44 | 10 46 | 6 25  | 1 23  | 25 11 | 17 2  | 5 36  | 17 21                             |
| 13 20  | 18 28 | 14 32 | 10 12 | 5 7   | 28 47 | 20 19 | 8 14  | 21 38                             |
| 13 36  | 22 13 | 18 21 | 14 2  | 8 55  | 2 28  | 23 42 | 10 55 | 25 53                             |
| 13 52  | 26 00 | 22 13 | 17 57 | 12 50 | 6 16  | 27 11 | 13 41 | 0 6                               |
| 14 8   | 29 50 | 26 8  | 21 56 | 16 50 | 10 11 | 0 49  | 16 33 | 4 16                              |
| 14 24  | 3 41  | 0 6   | 26 00 | 20 56 | 14 15 | 4 36  | 19 30 | 8 23                              |
| 14 40  | 7 35  | 4 9   | 0 9   | 25 10 | 18 28 | 8 35  | 22 36 | 12 27                             |
| 14 56  | 11 32 | 8 15  | 4 24  | 29 32 | 22 52 | 12 47 | 25 53 | 16 28                             |
| 15 12  | 15 32 | 12 26 | 8 45  | 4 3   | 27 29 | 17 14 | 29 22 | 20 26                             |
| 15 28  | 19 35 | 16 41 | 13 12 | 8 42  | 2 18  | 22 00 | 3 9   | 24 22                             |

(TABLE III—(contd.)

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Tables of Houses—Sayana

| Sid H. | 0°    | 10°   | 20°   | 30°   | 40°   | 50°   | 60°   | Tenth<br>House<br>For all<br>Lat. |
|--------|-------|-------|-------|-------|-------|-------|-------|-----------------------------------|
| H.M.   | =     | =     | =     | =     | =     | °     | °     |                                   |
| 15 44  | 23 41 | 21 00 | 17 46 | 13 31 | 7 21  | 27 7  | 7 17  | 28 15                             |
|        |       |       |       |       |       | =     |       | ↑                                 |
| 16 00  | 27 49 | 25 23 | 22 25 | 18 29 | 12 39 | 2 39  | 11 54 | 2 5                               |
|        | *     |       |       |       |       |       |       |                                   |
| 16 16  | 2 00  | 29 51 | 27 11 | 23 37 | 18 14 | 8 38  | 17 10 | 5 54                              |
|        |       | *     | *     | =     | =     | =     | °     |                                   |
| 16 32  | 6 14  | 4 22  | 2 3   | 28 54 | 24 4  | 15 9  | 23 20 | 9 40                              |
|        |       |       |       | *     | *     | =     |       |                                   |
| 16 48  | 10 30 | 8 56  | 7 00  | 4 20  | 1 00  | 22 12 | 0 42  | 13 24                             |
| 17 4   | 14 48 | 13 34 | 12 1  | 9 53  | 6 30  | 29 49 | 9 44  | 17 7                              |
|        |       |       |       |       |       | *     |       |                                   |
| 17 20  | 19 7  | 18 14 | 17 7  | 15 33 | 13 3  | 7 59  | 21 00 | 20 49                             |
|        |       |       |       |       |       | *     |       |                                   |
| 17 36  | 23 28 | 22 57 | 22 15 | 21 18 | 19 46 | 16 35 | 4 55  | 24 30                             |
| 17 52  | 27 49 | 27 38 | 27 25 | 27 6  | 26 35 | 25 30 | 21 17 | 28 10                             |
|        | °     | °     | °     | °     | °     | °     | °     | °                                 |
| 18 8   | 2 11  | 2 22  | 2 35  | 2 54  | 3 26  | 4 30  | 8 43  | 1 50                              |
| 18 24  | 6 32  | 7 4   | 7 45  | 8 42  | 10 14 | 13 25 | 25 5  | 5 30                              |
|        |       |       |       |       |       | °     |       |                                   |
| 18 40  | 10 53 | 11 46 | 12 54 | 14 27 | 16 57 | 22 1  | 9 00  | 9 11                              |
|        |       |       |       |       |       | °     |       |                                   |
| 18 56  | 15 12 | 16 26 | 17 59 | 20 7  | 23 30 | 0 11  | 20 16 | 12 53                             |
| 19 12  | 19 30 | 21 4  | 23 00 | 25 40 | 29 50 | 7 48  | 29 18 | 16 36                             |
|        |       |       |       | °     | °     | °     |       |                                   |
| 19 28  | 23 46 | 25 38 | 27 57 | 1 6   | 5 56  | 14 51 | 6 41  | 20 20                             |
|        |       | °     | °     |       |       |       |       |                                   |
| 19 44  | 28 00 | 1 00  | 2 49  | 6 32  | 11 46 | 21 22 | 12 50 | 24 6                              |
|        | °     |       |       |       |       |       |       |                                   |
| 20 00  | 2 11  | 4 37  | 7 35  | 11 31 | 17 21 | 27 21 | 18 6  | 27 55                             |
|        |       |       |       |       |       | °     |       | =                                 |
| 20 16  | 6 19  | 9 00  | 12 15 | 16 29 | 22 39 | 2 53  | 22 43 | 1 45                              |
| 20 32  | 10 25 | 13 38 | 16 48 | 21 18 | 27 42 | 8 00  | 26 51 | 5 33                              |
|        |       |       |       | °     | °     | °     |       |                                   |
| 20 48  | 14 28 | 17 34 | 21 15 | 25 58 | 2 32  | 12 46 | 0 38  | 9 34                              |
|        | °     | °     | °     | °     | °     | °     | °     |                                   |
| 21 4   | 18 28 | 21 45 | 25 36 | 0 28  | 7 8   | 17 13 | 4 7   | 13 32                             |

**TABLE III—(contd.)**  
**Tables of Houses—Sayana**

| Sid T.<br>H.M. | 0°    | 10°   | 20°   | 30°   | 40°   | 50°   | 60°   | Tenth<br>House<br>For all<br>Lat. |
|----------------|-------|-------|-------|-------|-------|-------|-------|-----------------------------------|
| 21 20          | ■     | 8     | 8     | π     | π     | π     | ⊗     | 7 24 17 33                        |
| 21 36          |       | 29 54 | 4 1   | 9 4   | 15 45 | 25 24 | 10 30 | 21 37                             |
| 21 52          | 0 11  | 3 52  | 8 4   | 13 10 | 19 49 | 29 11 | 13 27 | 25 44                             |
| 22 8           | 4 00  | 7 47  | 12 4  | 17 10 | 23 44 | 2 49  | 16 19 | 29 54                             |
| 22 24          | 7 47  | 11 39 | 15 58 | 21 5  | 27 32 | 6 19  | 19 5  | 4 7                               |
| 22 40          | 11 32 | 15 28 | 19 48 | 24 53 | 1 13  | 9 41  | 21 46 | 8 22                              |
| 22 56          | 15 16 | 19 14 | 23 35 | 28 37 | 4 49  | 12 58 | 24 25 | 12 39                             |
| 23 12          | 18 58 | 22 58 | 27 19 | 2 17  | 8 19  | 16 10 | 27 00 | 16 57                             |
| 23 28          | 22 39 | 26 41 | 1 00  | 5 53  | 11 46 | 19 17 | 29 33 | 21 17                             |
| 23 44          | 26 20 | 0 21  | 4 38  | 9 25  | 15 8  | 22 21 | 2 4   | 25 38                             |
| 24 00          |       |       |       |       |       |       |       | 30 00                             |

**TABLE IV**  
**Nakshatras and their Longitudes**

| No. | Rasi<br>(Sign)   | Nakshatra<br>(Constel-<br>lation) | Padas<br>(Quarters) | Space on the<br>ecliptic from<br>0° Aries |    |
|-----|------------------|-----------------------------------|---------------------|---|----|
| 1.  | Aries<br>♈       | 1. Aswini                         | 4                   | 13  | 20 |
|     |                  | 2. Bharani                        | 4                   | 26  | 40 |
|     |                  | 3. Krittika                       | 1                   | 30  | 0  |
| 2.  | Taurus<br>♉      | Krittika                          | 3                   | 40  | 0  |
|     |                  | 4. Rohini                         | 4                   | 53  | 20 |
|     |                  | 5. Mrigasira                      | 2                   | 60  | 0  |
| 3.  | Gemini<br>♊      | Mrigasira                         | 2                   | 66  | 40 |
|     |                  | 6. Aridra                         | 4                   | 80  | 0  |
|     |                  | 7. Punarvasu                      | 3                   | 90  | 0  |
| 4.  | Cancer<br>♋      | Punarvasu                         | 1                   | 93  | 20 |
|     |                  | 8. Pushyami                       | 4                   | 106                                       | 40 |
|     |                  | 9. Aslesha                        | 1                   | 120                                       | 0  |
| 5.  | Leo<br>♌         | 10. Makha                         | 4                   | 133                                       | 20 |
|     |                  | 11. Pubba                         | 1                   | 146                                       | 40 |
|     |                  | 12. Uttara                        | 1                   | 150                                       | 0  |
| 6.  | Virgo<br>♍       | Uttara                            | 3                   | 160                                       | 0  |
|     |                  | 13. Hasta                         | 1                   | 173                                       | 20 |
|     |                  | 14. Chitta                        | 2                   | 180                                       | 0  |
| 7.  | Libra<br>♎       | Chitta                            | 2                   | 186                                       | 40 |
|     |                  | 15. Swati                         | 4                   | 200                                       | 0  |
|     |                  | 16. Visakha                       | 3                   | 210                                       | 0  |
| 8.  | Scorpio<br>♏     | Visakha                           | 1                   | 213                                       | 20 |
|     |                  | 17. Anuradha                      | 4                   | 226                                       | 40 |
|     |                  | 18. Jyeshtha                      | 4                   | 240                                       | 0  |
| 9.  | Sagittarius<br>♐ | 19. Moola                         | 4                   | 253                                       | 20 |
|     |                  | 20. Poorvashadha                  | 4                   | 266                                       | 40 |
|     |                  | 21. Uttarashadha                  | 1                   | 270                                       | 0  |
| 10. | Capricorn<br>♑   | Uttarashadha                      | 3                   | 280                                       | 0  |
|     |                  | 22. Sravana                       | 4                   | 293                                       | 20 |
|     |                  | 23. Dhanishta                     | 2                   | 300                                       | 0  |
| 11. | Aquarius<br>♒    | Dhanishta                         | 2                   | 306                                       | 40 |
|     |                  | 24. Satabhisha                    | 4                   | 320                                       | 0  |
|     |                  | 25. Poorvabhadra                  | 3                   | 330                                       | 0  |
| 12. | Pisces<br>♓      | Poorvabhadra                      | 1                   | 333                                       | 20 |
|     |                  | 26. Uttarabhadra                  | 4                   | 346                                       | 40 |
|     |                  | 27. Revati                        | 1                   | 360                                       | 0  |

**TABLE V**

The following is reproduced from Mr. N. C. Lahiri's  
*Indian Ephemeris*

**Balance of Vimsottari Dasa by Longitude of the Moon**

In the example given the Moon is in Aquarius  
25° 59' 46" or 26°: For this balance of Jupiter's  
Dasa is Yrs. 8-9-18.

| Long.<br>of<br>Moon | Moon in<br>Mesha,<br>Simha,<br>Dhanus |    |    | Moon in<br>Vrishabha,<br>Kanya,<br>Makara |    |    | Moon in<br>Mithuna,<br>Thula,<br>Kumbha |    |    | Moon in<br>Kataka,<br>Vrischika,<br>Meena |   |    |
|---------------------|---------------------------------------|----|----|---|----|----|---|----|----|---|---|----|
|                     | Balance of<br>Dasa                    |    |    | Balance of<br>Dasa                        |    |    | Balance of<br>Dasa                      |    |    | Balance of<br>Dasa                        |   |    |
| ° ' "               | y                                     | m  | d  | y   | m  | d  | y                                       | m  | d  | y   | m | d  |
|                     | <i>Kethu</i>                          |    |    | <i>Sun</i>                                |    |    | <i>Mars</i>                             |    |    | <i>Jupiter</i>                            |   |    |
| 0 0                 | 7                                     | 0  | 0  | 4   | 6  | 0  | 3                                       | 6  | 0  | 4   | 0 | 0  |
| 0 20                | 6                                     | 9  | 27 | 4   | 4  | 6  | 3                                       | 3  | 27 | 3   | 7 | 6  |
| 0 40                | 6                                     | 7  | 24 | 4   | 2  | 12 | 3                                       | 1  | 24 | 3   | 2 | 12 |
| 1 0                 | 6                                     | 5  | 21 | 4   | 0  | 18 | 2                                       | 11 | 21 | 2   | 9 | 18 |
| 1 20                | 6                                     | 3  | 18 | 3   | 10 | 24 | 2                                       | 9  | 18 | 2   | 4 | 24 |
| 1 40                | 6                                     | 1  | 15 | 3   | 9  | 0  | 2                                       | 7  | 15 | 2   | 0 | 0  |
| 2 0                 | 5                                     | 11 | 12 | 3   | 7  | 6  | 2                                       | 5  | 12 | 1   | 7 | 6  |
| 2 20                | 5                                     | 9  | 9  | 3   | 5  | 12 | 2                                       | 3  | 9  | 1   | 2 | 12 |
| 2 40                | 5                                     | 7  | 6  | 3   | 3  | 18 | 2                                       | 1  | 6  | 0   | 9 | 18 |
| 3 0                 | 5                                     | 5  | 3  | 3   | 1  | 24 | 1                                       | 11 | 3  | 0   | 4 | 24 |
| 3 20                | 5                                     | 3  | 0  | 3   | 0  | 0  | 1                                       | 9  | 0  | 19  | 0 | 0  |
| 3 40                | 5                                     | 0  | 27 | 2   | 10 | 6  | 1                                       | 6  | 27 | 18  | 6 | 9  |
| 4 0                 | 4                                     | 10 | 24 | 2   | 8  | 12 | 1                                       | 4  | 24 | 18  | 0 | 18 |
| 4 20                | 4                                     | 8  | 21 | 2   | 6  | 18 | 1                                       | 2  | 21 | 17  | 6 | 27 |
| 4 40                | 4                                     | 6  | 18 | 2   | 4  | 24 | 1                                       | 0  | 18 | 17  | 1 | 6  |
| 5 0                 | 4                                     | 4  | 15 | 2   | 3  | 0  | 0                                       | 10 | 15 | 16  | 7 | 15 |
| 5 20                | 4                                     | 2  | 12 | 2   | 1  | 6  | 0                                       | 8  | 12 | 16  | 1 | 24 |
| 5 40                | 4                                     | 0  | 9  | 1   | 11 | 12 | 0                                       | 6  | 9  | 15  | 8 | 3  |
| 6 0                 | 3                                     | 10 | 6  | 1   | 9  | 18 | 0                                       | 4  | 6  | 15  | 2 | 12 |
| 6 20                | 3                                     | 8  | 3  | 1   | 7  | 24 | 0                                       | 2  | 3  | 14  | 8 | 21 |
|                     |                                       |    |    |   |    |    |   |    |    | <i>Saturn</i>                             |   |    |



TABLE V (contd.)

| Long.<br>of<br>Moon | Moon in<br>Mesha,<br>Simha,<br>Dhanus |    |    | Moon in<br>Vrishabha,<br>Kanya,<br>Makara |    |    | Moon in<br>Mithuna,<br>Thula,<br>Kumbha |    |    | Moon in<br>Kataka,<br>Vrischika,<br>Meena |    |    |
|---------------------|---------------------------------------|----|----|---|----|----|---|----|----|---|----|----|
|                     | Balance of<br>Dasa                    |    |    | Balance of<br>Dasa                        |    |    | Balance of<br>Dasa                      |    |    | Balance of<br>Dasa                        |    |    |
|                     | Ketu                                  |    |    | Sun                                       |    |    | Rahu                                    |    |    | Saturn                                    |    |    |
| 6 40                | 3                                     | 6  | 0  | 1   | 6  | 0  | 18                                      | 0  | 0  | 14  | 3  | 0  |
| 7 0                 | 3                                     | 3  | 27 | 1   | 4  | 6  | 17                                      | 6  | 18 | 13  | 9  | 9  |
| 7 20                | 3                                     | 1  | 24 | 1   | 2  | 12 | 17                                      | 1  | 6  | 13  | 3  | 18 |
| 7 40                | 2                                     | 11 | 21 | 1   | 0  | 18 | 16                                      | 7  | 24 | 12  | 9  | 27 |
| 8 0                 | 2                                     | 9  | 18 | 0   | 10 | 24 | 16                                      | 2  | 12 | 12  | 4  | 6  |
| 8 20                | 2                                     | 7  | 15 | 0   | 9  | 0  | 15                                      | 9  | 0  | 11  | 10 | 15 |
| 8 40                | 2                                     | 5  | 12 | 0   | 7  | 6  | 15                                      | 3  | 18 | 11  | 4  | 24 |
| 9 0                 | 2                                     | 3  | 9  | 0   | 5  | 12 | 14                                      | 10 | 6  | 10  | 11 | 3  |
| 9 20                | 2                                     | 1  | 6  | 0   | 3  | 18 | 14                                      | 4  | 24 | 10  | 5  | 12 |
| 9 40                | 1                                     | 11 | 3  | 0   | 1  | 24 | 13                                      | 11 | 12 | 9   | 11 | 21 |
|                     | Kethu                                 |    |    | Moon                                      |    |    |   |    |    |   |    |    |
| 10 0                | 1                                     | 9  | 0  | 10  | 0  | 0  | 13                                      | 6  | 0  | 9   | 6  | 0  |
| 10 20               | 1                                     | 6  | 27 | 9   | 9  | 0  | 13                                      | 0  | 18 | 9   | 0  | 9  |
| 10 40               | 1                                     | 4  | 24 | 9   | 6  | 0  | 12                                      | 7  | 6  | 8   | 6  | 18 |
| 11 0                | 1                                     | 2  | 21 | 9   | 3  | 0  | 12                                      | 1  | 24 | 8   | 0  | 27 |
| 11 20               | 1                                     | 0  | 18 | 9   | 0  | 0  | 11                                      | 8  | 12 | 7   | 7  | 6  |
| 11 40               | 0                                     | 10 | 15 | 8   | 9  | 0  | 11                                      | 3  | 0  | 7   | 1  | 15 |
| 12 0                | 0                                     | 8  | 12 | 8   | 6  | 0  | 10                                      | 9  | 18 | 6   | 7  | 24 |
| 12 20               | 0                                     | 6  | 9  | 8   | 3  | 0  | 10                                      | 4  | 6  | 6   | 2  | 3  |
| 12 40               | 0                                     | 4  | 6  | 8   | 0  | 0  | 9                                       | 10 | 24 | 5   | 8  | 12 |
| 13 0                | 0                                     | 2  | 3  | 7   | 9  | 0  | 9                                       | 5  | 12 | 5   | 2  | 21 |
|                     | Venus                                 |    |    |   |    |    |   |    |    |   |    |    |
| 13 20               | 20                                    | 0  | 0  | 7   | 6  | 0  | 9                                       | 0  | 0  | 4   | 9  | 0  |
| 13 40               | 19                                    | 6  | 0  | 7   | 3  | 0  | 8                                       | 6  | 18 | 4   | 3  | 9  |
| 14 0                | 19                                    | 0  | 0  | 7   | 0  | 0  | 8                                       | 1  | 6  | 3   | 9  | 18 |
| 14 20               | 18                                    | 6  | 0  | 6   | 9  | 0  | 7                                       | 7  | 24 | 3   | 3  | 27 |
| 14 40               | 18                                    | 0  | 0  | 6   | 6  | 0  | 7                                       | 2  | 12 | 2   | 10 | 6  |
| 15 0                | 17                                    | 6  | 0  | 6   | 3  | 0  | 6                                       | 9  | 0  | 2   | 4  | 15 |
| 15 20               | 17                                    | 0  | 0  | 6   | 0  | 0  | 6                                       | 3  | 18 | 1   | 10 | 24 |
| 15 40               | 16                                    | 6  | 0  | 5   | 9  | 0  | 5                                       | 10 | 6  | 1   | 5  | 3  |
| 16 0                | 16                                    | 0  | 0  | 5   | 6  | 0  | 5                                       | 4  | 24 | 0   | 11 | 12 |
| 16 20               | 15                                    | 6  | 0  | 5   | 3  | 0  | 4                                       | 11 | 12 | 0   | 5  | 21 |

TABLE V (contd.)

| Long.<br>of<br>Moon | Moon in<br>Mesha,<br>Simha,<br>Dhanus |   |   | Moon in<br>Vrishabha,<br>Kanya,<br>Makara |    |    | Moon in<br>Mithuna,<br>Thula,<br>Kumbha |    |    | Moon in<br>Kataka,<br>Vrisohika,<br>Meena |    |    |
|---------------------|---------------------------------------|---|---|---|----|----|---|----|----|---|----|----|
|                     | Balance of<br>Dasa                    |   |   | Balance of<br>Dasa                        |    |    | Balance of<br>Dasa                      |    |    | Balance of<br>Dasa                        |    |    |
|                     | <i>Venus</i>                          |   |   | <i>Moon</i>                               |    |    | <i>Rahu</i>                             |    |    | <i>Mercury</i>                            |    |    |
| 16 40               | 15                                    | 0 | 0 | 5   | 0  | 0  | 4                                       | 6  | 0  | 17  | 0  | 0  |
| 17 0                | 14                                    | 6 | 0 | 4   | 9  | 0  | 4                                       | 0  | 18 | 16  | 6  | 27 |
| 17 20               | 14                                    | 0 | 0 | 4   | 6  | 0  | 3                                       | 7  | 6  | 16  | 1  | 24 |
| 17 40               | 13                                    | 6 | 0 | 4   | 3  | 0  | 3                                       | 1  | 24 | 15  | 8  | 21 |
| 18 0                | 13                                    | 0 | 0 | 4   | 0  | 0  | 2                                       | 8  | 12 | 15  | 3  | 18 |
| 18 20               | 12                                    | 6 | 0 | 3   | 9  | 0  | 2                                       | 3  | 0  | 14  | 10 | 15 |
| 18 40               | 12                                    | 0 | 0 | 3   | 6  | 0  | 1                                       | 9  | 18 | 14  | 5  | 12 |
| 19 0                | 11                                    | 6 | 0 | 3   | 3  | 0  | 1                                       | 4  | 6  | 14  | 0  | 9  |
| 19 20               | 11                                    | 0 | 0 | 3   | 0  | 0  | 0                                       | 10 | 24 | 13  | 7  | 6  |
| 19 40               | 10                                    | 6 | 0 | 2   | 9  | 0  | 0                                       | 5  | 12 | 13  | 2  | 3  |
|                     | <i>Venus</i>                          |   |   | <i>Moon</i>                               |    |    | <i>Jupiter</i>                          |    |    | <i>Mercury</i>                            |    |    |
| 20 0                | 10                                    | 0 | 0 | 2   | 6  | 0  | 16                                      | 0  | 0  | 12  | 9  | 0  |
| 20 20               | 9                                     | 6 | 0 | 2   | 3  | 0  | 15                                      | 7  | 6  | 12  | 3  | 27 |
| 20 40               | 9                                     | 0 | 0 | 2   | 0  | 0  | 15                                      | 2  | 12 | 11  | 10 | 24 |
| 21 0                | 8                                     | 6 | 0 | 1   | 9  | 0  | 14                                      | 9  | 18 | 11  | 5  | 21 |
| 21 20               | 8                                     | 0 | 0 | 1   | 6  | 0  | 14                                      | 4  | 24 | 11  | 0  | 18 |
| 21 40               | 7                                     | 6 | 0 | 1   | 3  | 0  | 14                                      | 0  | 0  | 10  | 7  | 15 |
| 22 0                | 7                                     | 0 | 0 | 1   | 0  | 0  | 13                                      | 7  | 6  | 10  | 2  | 12 |
| 22 20               | 6                                     | 6 | 0 | 0   | 9  | 0  | 13                                      | 2  | 12 | 9   | 9  | 9  |
| 22 40               | 6                                     | 0 | 0 | 0   | 6  | 0  | 12                                      | 9  | 18 | 9   | 4  | 6  |
| 23 0                | 5                                     | 6 | 0 | 0   | 3  | 0  | 12                                      | 4  | 24 | 8   | 11 | 3  |
|                     | <i>Mars</i>                           |   |   |   |    |    |   |    |    |   |    |    |
| 23 20               | 5                                     | 0 | 0 | 7   | 0  | 0  | 12                                      | 0  | 0  | 8   | 6  | 0  |
| 23 40               | 4                                     | 6 | 0 | 6   | 9  | 27 | 11                                      | 7  | 6  | 8   | 0  | 27 |
| 24 0                | 4                                     | 0 | 0 | 6   | 7  | 24 | 11                                      | 2  | 12 | 7   | 7  | 24 |
| 24 20               | 3                                     | 6 | 0 | 6   | 5  | 21 | 10                                      | 9  | 18 | 7   | 2  | 21 |
| 24 40               | 3                                     | 0 | 0 | 6   | 3  | 18 | 10                                      | 4  | 24 | 6   | 9  | 18 |
| 25 0                | 2                                     | 6 | 0 | 6   | 1  | 15 | 10                                      | 0  | 0  | 6   | 4  | 15 |
| 25 20               | 2                                     | 0 | 0 | 5   | 11 | 12 | 9                                       | 7  | 6  | 5   | 11 | 12 |
| 25 40               | 1                                     | 6 | 0 | 5   | 9  | 9  | 9                                       | 2  | 12 | 5   | 6  | 9  |
| 26 0                | 1                                     | 0 | 0 | 5   | 7  | 6  | 8                                       | 9  | 18 | 5   | 1  | 6  |
| 26 20               | 0                                     | 6 | 0 | 5   | 5  | 3  | 8                                       | 4  | 24 | 4   | 8  | 3  |

TABLE V (contd.)

| Long.<br>of<br>Moon | Moon in<br>Masha,<br>Simha,<br>Dhanus |    |    | Moon in<br>Vrishabha,<br>Kanya,<br>Makara |    |    | Moon in<br>Mithuna,<br>Thula,<br>Kumbha |   |    | Moon in<br>Kataka,<br>Vrisshika,<br>Meena |    |    |
|---------------------|---------------------------------------|----|----|---|----|----|---|---|----|---|----|----|
|                     | Balance of<br>Dasa                    |    |    | Balance of<br>Dasa                        |    |    | Balance of<br>Dasa                      |   |    | Balance of<br>Dasa                        |    |    |
|                     | Sun                                   |    |    | Mars                                      |    |    | Jupiter                                 |   |    | Mercury                                   |    |    |
| 26 40               | 6                                     | 0  | 0  | 5   | 3  | 0  | 8                                       | 0 | 0  | 4   | 3  | 0  |
| 27 0                | 5                                     | 10 | 6  | 5   | 0  | 27 | 7                                       | 7 | 6  | 3   | 9  | 27 |
| 27 20               | 5                                     | 8  | 12 | 4   | 10 | 24 | 7                                       | 2 | 12 | 3   | 4  | 24 |
| 27 40               | 5                                     | 6  | 18 | 4   | 8  | 21 | 6                                       | 9 | 18 | 2   | 11 | 21 |
| 28 0                | 5                                     | 4  | 24 | 4   | 6  | 18 | 6                                       | 4 | 24 | 2   | 6  | 18 |
| 28 20               | 5                                     | 3  | 0  | 4   | 4  | 15 | 6                                       | 0 | 00 | 2   | 1  | 15 |
| 28 40               | 5                                     | 1  | 6  | 4   | 2  | 12 | 5                                       | 7 | 6  | 1   | 8  | 12 |
| 29 0                | 4                                     | 11 | 12 | 4   | 0  | 9  | 5                                       | 2 | 12 | 1   | 3  | 9  |
| 29 20               | 4                                     | 9  | 18 | 3   | 10 | 6  | 4                                       | 9 | 18 | 0   | 10 | 6  |
| 29 40               | 4                                     | 7  | 24 | 3   | 8  | 3  | 4                                       | 4 | 24 | 0   | 5  | 3  |
| 30 0                | 4                                     | 6  | 0  | 3   | 6  | 0  | 4                                       | 0 | 0  | 0   | 0  | 0  |

## Proportional Parts for Dasas of Planets

|    | Kethu |    | Venus |    | Sun |    | Moon |    | Mars |    | Rahu |    | Jupit. |    | Saturn |    | Merc. |    |
|----|-------|----|-------|----|-----|----|------|----|------|----|------|----|--------|----|--------|----|-------|----|
|    | m     | d  | m     | d  | m   | d  | m    | d  | m    | d  | m    | d  | m      | d  | m      | d  | m     | d  |
| 1  | 0     | 3  | 0     | 9  | 0   | 3  | 0    | 5  | 0    | 3  | 0    | 8  | 0      | 7  | 0      | 9  | 0     | 5  |
| 2  | 0     | 6  | 0     | 18 | 0   | 5  | 0    | 9  | 0    | 6  | 0    | 16 | 0      | 14 | 0      | 17 | 0     | 15 |
| 3  | 0     | 9  | 0     | 27 | 0   | 8  | 0    | 14 | 0    | 9  | 0    | 24 | 0      | 22 | 0      | 26 | 0     | 23 |
| 4  | 0     | 13 | 1     | 6  | 0   | 11 | 0    | 18 | 0    | 13 | 1    | 2  | 0      | 29 | 1      | 4  | 1     | 1  |
| 5  | 0     | 16 | 1     | 15 | 0   | 14 | 0    | 23 | 0    | 16 | 1    | 11 | 1      | 6  | 1      | 13 | 1     | 8  |
| 6  | 0     | 19 | 1     | 24 | 0   | 16 | 0    | 27 | 0    | 19 | 1    | 19 | 1      | 13 | 1      | 21 | 1     | 16 |
| 7  | 0     | 22 | 2     | 3  | 0   | 19 | 1    | 2  | 0    | 22 | 1    | 27 | 1      | 20 | 2      | 0  | 1     | 24 |
| 8  | 0     | 25 | 2     | 12 | 0   | 22 | 1    | 6  | 0    | 25 | 2    | 5  | 1      | 28 | 2      | 8  | 2     | 1  |
| 9  | 0     | 28 | 2     | 21 | 0   | 24 | 1    | 11 | 0    | 28 | 2    | 13 | 2      | 5  | 2      | 17 | 2     | 9  |
| 10 | 1     | 1  | 3     | 0  | 0   | 27 | 1    | 15 | 1    | 1  | 2    | 21 | 2      | 12 | 2      | 26 | 2     | 17 |
| 15 | 1     | 17 | 4     | 15 | 1   | 11 | 2    | 8  | 1    | 17 | 4    | 2  | 3      | 18 | 4      | 8  | 3     | 25 |
| 20 | 2     | 3  | 6     | 0  | 1   | 24 | 3    | 0  | 2    | 3  | 5    | 12 | 4      | 24 | 5      | 21 | 5     | 3  |

**TABLE VI**  
*Table of Yogas*

| Sl. No. | Yoga       | Joint longitude of Sun and Moon | Upto    |
|---------|------------|---------------------------------|---------|
| 1       | Vishkambha | ...                             | 13° 20' |
| 2       | Priti      | ...                             | 26 40   |
| 3       | Ayushman   | ...                             | 40 00   |
| 4       | Saubhagya  | ...                             | 53 20   |
| 5       | Sobhana    | ...                             | 66 40   |
| 6       | Atiganda   | ...                             | 80 00   |
| 7       | Sukarman   | ...                             | 93 20   |
| 8       | Dhriti     | ...                             | 106 40  |
| 9       | Soola      | ...                             | 120 00  |
| 10      | Ganda      | ...                             | 133 20  |
| 11      | Vridhhi    | ...                             | 146 40  |
| 12      | Dhruva     | ...                             | 160 00  |
| 13      | Vyaghata   | ...                             | 173 20  |
| 14      | Harshana   | ...                             | 186 40  |
| 15      | Vajra      | ...                             | 200 00  |
| 16      | Siddhi     | ...                             | 213 20  |
| 17      | Vyatipata  | ...                             | 226 40  |
| 18      | Variyan    | ...                             | 240 00  |
| 19      | Parigha    | ...                             | 253 20  |
| 20      | Siva       | ...                             | 266 40  |
| 21      | Siddha     | ...                             | 280 00  |
| 22      | Sadhya     | ...                             | 293 20  |
| 23      | Subha      | ...                             | 306 40  |
| 24      | Sukla      | ...                             | 320 00  |
| 25      | Brahma     | ...                             | 333 20  |
| 26      | Indra      | ...                             | 346 40  |
| 27      | Vaidhriti  | ...                             | 360 00  |

### EXPLANATION

Suppose the sum of the longitudes of the Sun and the Moon is 281°. Reference to the above table reveals Siddha-yoga lasting from 280° to 293° 20'. Therefore one degree has elapsed in this yoga.

TABLE VII

*Terrestrial Latitudes and Longitudes*

| <i>Name of Place</i> | <i>Name of Country</i> | <i>Latitude</i> |   |    | <i>Longitude</i> |   |    |
|----------------------|------------------------|-----------------|---|----|------------------|---|----|
| Aberdeen             | Scotland               | 57              | N | 10 | 2                | W | 6  |
| Abyssinia State      | Africa                 | 10              | N | 0  | 40               | E | 0  |
| Abu Mount            | India                  | 24              | N | 41 | 72               | E | 50 |
| Acapulco             | Mexico                 | 16              | N | 59 | 100              | W | 00 |
| Achin                | Sumatra                | 5               | N | 0  | 96               | E | 30 |
| Addis Ababa          | Ethiopia               | 9               | N | 2  | 38               | E | 42 |
| Adelaide             | South Australia        | 34              | S | 55 | 138              | E | 32 |
| Aden                 | Southern Yemen         | 12              | N | 50 | 45               | E | 00 |
| Adilabad             | India                  | 19              | N | 33 | 78               | E | 35 |
| Adoni                | India                  | 15              | N | 28 | 77               | E | 16 |
| Agartala             | India                  | 23              | N | 50 | 91               | E | 23 |
| Agin Court           | France                 | 53              | N | 29 | 2                | E | 9  |
| Agra                 | India                  | 27              | N | 17 | 78               | E | 13 |
| Ahmedabad            | India                  | 23              | N | 0  | 72               | E | 40 |
| Ahmednagar           | India                  | 19              | N | 08 | 74               | E | 48 |
| Aix-la-Chapelle      | Germany                | 50              | N | 46 | 6                | E | 2  |
| Ajanta               | India                  | 20              | N | 31 | 75               | E | 48 |
| Ajaccio              | France                 | 41              | N | 55 | 8                | E | 44 |
| Ajmer                | India                  | 26              | N | 28 | 74               | E | 37 |
| Akyab                | Burma                  | 20              | N | 18 | 92               | E | 45 |
| Alaska               | N. America             | 65              | N | 0  | 150              | W | 0  |
| Alcola               | India                  | 20              | N | 32 | 77               | E | 02 |
| Alexandria           | Egypt                  | 31              | N | 12 | 30               | E | 10 |
| Algeriers            | Algeria                | 36              | N | 42 | 3                | E | 8  |
| Aligarh              | India                  | 27              | N | 55 | 78               | E | 10 |
| Allahabad            | India                  | 25              | N | 25 | 81               | E | 58 |
| Alleppey             | India                  | 9               | N | 30 | 76               | E | 28 |
| Almora               | India                  | 29              | N | 38 | 79               | E | 42 |
| Alwar                | India                  | 27              | N | 38 | 76               | E | 34 |
| Amarapur             | Burma                  | 2               | N | 50 | 96               | E | 2  |
| Ambala               | India                  | 30              | N | 22 | 76               | E | 50 |
| Amraoti              | India                  | 20              | N | 58 | 77               | E | 56 |

| <i>Name of Place</i> | <i>Name of Country</i> | <i>Latitude</i> |      | <i>Longitude</i> |      |
|----------------------|------------------------|-----------------|------|------------------|------|
| Amritsar             | India                  | 31              | N 35 | 74               | E 57 |
| Amsterdam            | Netherlands            | 52              | N 22 | 4                | E 53 |
| Amona                | Italy                  | 43              | N 28 | 13               | E 32 |
| Anantapur            | India                  | 14              | N 39 | 77               | E 42 |
| Ankara               | Turkey                 | 40              | N 0  | 32               | E 54 |
| Antwerp              | Belgium                | 51              | N 13 | 4                | E 24 |
| Anuradhapura         | Ceylon                 | 8               | N 26 | 80               | E 20 |
| Arakan               | Burma                  | 20              | N 46 | 93               | E 12 |
| Aravali (Hills)      | India                  | 25              | N 25 | 73               | E 30 |
| Arcot                | India                  | 12              | N 55 | 79               | E 20 |
| Argentina            | S. America             | 36              | S 0  | 65               | W 0  |
| Arkonam              | India                  | 13              | N 7  | 79               | E 43 |
| Athens               | Greece                 | 37              | N 58 | 23               | E 46 |
| Atlanta              | U. S. A.               | 33              | N 53 | 84               | W 19 |
| Augsburgh            | Germany                | 48              | N 18 | 10               | E 53 |
| Aurangabad           | India                  | 19              | N 52 | 75               | E 22 |
| Babylon              | Mesopotamia            | 32              | N 30 | 44               | E 35 |
| Bagdad               | Iraq                   | 33              | N 20 | 44               | E 30 |
| Bahama Islands       | West Indies            | 23              | N 0  | 74               | W 0  |
| Baharain Island      | Persian Gulf           | 26              | N 0  | 50               | E 35 |
| Balasore             | India                  | 21              | N 35 | 87               | E 3  |
| Balsar               | India                  | 20              | N 35 | 73               | E 5  |
| Baltic Sea           | Europe                 | 57              | N 0  | 18               | E 0  |
| Baltimore            | Ireland                | 51              | N 28 | 9                | W 19 |
| Baltimore            | U. S. A.               | 39              | N 35 | 76               | W 36 |
| Baluchistan (State)  | Asia                   | 28              | N 4  | 65               | E 0  |
| Banda                | India                  | 25              | N 28 | 80               | E 20 |
| Bangalore            | India                  | 12              | N 59 | 77               | E 40 |
| Bangkok              | Thailand               | 13              | N 45 | 100              | E 35 |
| Barbados             | West Indies            | 13              | N 40 | 59               | W 50 |
| Barcilly             | India                  | 28              | N 22 | 79               | E 27 |
| Baroda               | India                  | 22              | N 21 | 73               | E 13 |
| Bastar               | India                  | 19              | N 25 | 81               | E 40 |
| Batavia              | Java                   | 6               | N 0  | 106              | E 58 |
| Bavanahotte          | India                  | 22              | N 18 | 86               | E 10 |
| Beirut               | Lebanon                | 35              | N 34 | 35               | E 28 |
| Belgaum              | India                  | 15              | N 55 | 74               | E 35 |

| <i>Name of Place</i> | <i>Name of Country</i> | <i>Latitude</i> |   |    | <i>Longitude</i> |   |    |
|----------------------|------------------------|-----------------|---|----|------------------|---|----|
|                      | Europe                 | 51              | N | 0  | 4                | E | 30 |
| Belgium              | Yugoslavia             | 44              | N | 57 | 20               | E | 37 |
| Belgrade             | British Honduras       | 17              | N | 30 | 88               | W | 20 |
| Belize               | India                  | 15              | N | 10 | 76               | E | 56 |
| Bellary              | India                  | 12              | N | 58 | 76               | E | 44 |
| Belur                | India                  | 25              | N | 20 | 83               | E | 0  |
| Benaras              | India                  | 24              | N | 2  | 88               | E | 27 |
| Berhampore           | East Germany           | 53              | N | 32 | 13               | E | 24 |
| Berlin               | Switzerland            | 46              | N | 57 | 7                | E | 28 |
| Berne                | Palestine              | 31              | N | 41 | 35               | E | 15 |
| Bethlehem            | India                  | 25              | N | 11 | 87               | E | 15 |
| Bhagalpur            | India                  | 27              | N | 15 | 77               | E | 30 |
| Bharatpur            | India                  | 30              | N | 15 | 74               | E | 57 |
| Bhatinda             | India                  | 21              | N | 49 | 77               | E | 10 |
| Bhavnagar            | India                  | 23              | N | 15 | 77               | E | 30 |
| Bhopal               | India                  | 20              | N | 13 | 85               | E | 50 |
| Bhubaneshwar         | India                  | 23              | N | 12 | 69               | E | 54 |
| Bhuj                 | India                  | 17              | N | 55 | 77               | E | 35 |
| Bidar                | India                  | 16              | N | 50 | 75               | E | 55 |
| Bijapur              | India                  | 29              | N | 22 | 78               | E | 9  |
| Bijnour              | India                  | 28              | N | 2  | 73               | E | 18 |
| Bikaner              | India                  | 22              | N | 2  | 82               | E | 15 |
| Bilaspur             | U. S. A.               | 46              | N | 50 | 100              | W | 50 |
| Bismark              | India                  | 24              | N | 48 | 85               | E | 1  |
| Bodh Gaya            | India                  | 18              | N | 55 | 72               | E | 50 |
| Bombay               | India                  | 50              | N | 43 | 7                | E | 6  |
| Bonn                 | East Germany           | 25              | N | 25 | 76               | E | 0  |
| Boordere             | India                  | 42              | N | 20 | 71               | W | 0  |
| Boston               | U. S. A.               | 40              | N | 39 | 17               | E | 56 |
| Brindisi             | Italy                  | 27              | S | 25 | 152              | E | 54 |
| Brisbane             | Queensland             | 21              | N | 47 | 73               | E | 0  |
| Broach               | India                  | 52              | N | 15 | 10               | E | 22 |
| Brunswick            | Germany                | 50              | N | 51 | 4                | E | 21 |
| Bruxelles            | Belgium                | 44              | N | 27 | 26               | E | 10 |
| Bucharest            | Rumania                | 47              | N | 29 | 19               | E | 5  |
| Budapest             | Hungary                | 34              | S | 30 | 58               | W | 20 |
| Buenos Aires         | Argentina              | 20              | N | 40 | 72               | E | 58 |
| Bulsar               | India                  |                 |   |    |                  |   |    |



| <i>Name of Place</i> | <i>Name of Country</i> | <i>Latitude</i> |   |    | <i>Longitude</i> |   |    |
|----------------------|------------------------|-----------------|---|----|------------------|---|----|
| Burdwan              | India                  | 23              | N | 16 | 87               | E | 54 |
| Bushire              | Persia                 | 29              | N | 0  | 50               | E | 50 |
| Cairo                | Egypt                  | 30              | N | 1  | 31               | E | 14 |
| Calais               | France                 | 50              | N | 57 | 1                | E | 51 |
| Calcutta             | India                  | 22              | N | 36 | 88               | E | 24 |
| Calicut              | India                  | 11              | N | 15 | 75               | E | 47 |
| Cambridge            | England                | 52              | N | 12 | 0                | E | 8  |
| Canberra             | Australia              | 35              | S | 15 | 149              | E | 8  |
| Cannanore            | India                  | 11              | N | 53 | 75               | E | 27 |
| Cantebury            | England                | 51              | N | 16 | 1                | E | 4  |
| Canton               | China                  | 23              | N | 25 | 113              | E | 32 |
| Cape Town            | C. of G. Hope          | 33              | S | 59 | 18               | E | 25 |
| Caracas              | Venezuela              | 10              | N | 30 | 66               | W | 50 |
| Chandernagore        | India                  | 22              | N | 48 | 88               | E | 31 |
| Chandigarh           | India                  | 30              | N | 30 | 76               | E | 58 |
| Charleston           | U. S. A.               | 32              | N | 54 | 80               | W | 0  |
| Chicago              | U. S. A.               | 41              | N | 56 | 87               | E | 50 |
| Chickmagalur         | India                  | 13              | N | 10 | 75               | E | 48 |
| Chitradurg           | India                  | 14              | N | 14 | 76               | E | 26 |
| Chittagong           | Bangla Desh            | 22              | N | 19 | 91               | E | 55 |
| Chittoor             | India                  | 13              | N | 15 | 79               | E | 5  |
| Chota Nagpur         | India                  | 23              | N | 0  | 83               | E | 0  |
| Cochin               | India                  | 9               | N | 55 | 76               | E | 22 |
| Coimbatore           | India                  | 11              | N | 2  | 76               | E | 59 |
| Cologne              | Germany                | 50              | N | 56 | 6                | E | 58 |
| Colombo              | Ceylon                 | 7               | N | 0  | 79               | E | 45 |
| Constantinople       | Turkey                 | 41              | N | 1  | 28               | E | 55 |
| Copenhagen           | Denmark                | 55              | N | 40 | 12               | E | 34 |
| Corsica I            | France                 | 42              | N | 10 | 9                | E | 0  |
| Costa Rica           | Central America        | 10              | N | 0  | 84               | W | 0  |
| Croydon              | England                | 51              | N | 22 | 0                | W | 8  |
| Croydon              | Queensland             | 11              | S | 10 | 142              | E | 0  |
| Cuddalore            | India                  | 11              | N | 46 | 79               | E | 45 |
| Cuddapah             | India                  | 14              | N | 30 | 78               | E | 47 |
| Cuttack              | India                  | 20              | N | 25 | 85               | E | 57 |
| Dacca                | Bangla Desh            | 23              | N | 43 | 90               | W | 26 |
| Dakoth N-Sb.         | U. S. A.               | 47              | N | 0  | 100              | W | 0  |

| <i>Name of Place</i> | <i>Name of Country</i> | <i>Latitude</i> |   |    | <i>Longitude</i> |   |    |
|----------------------|------------------------|-----------------|---|----|------------------|---|----|
| Daman                | India                  | 20              | N | 25 | 72               | E | 57 |
| Damascus             | Syria                  | 33              | N | 30 | 36               | E | 18 |
| Dar-es-Salam         | Tanganika              | 6               | S | 50 | 39               | E | 12 |
| Daranga              | India                  | 26              | N | 51 | 91               | E | 26 |
| Darbhangā            | India                  | 26              | N | 15 | 86               | E | 13 |
| Darjeeling           | India                  | 27              | N | 3  | 88               | E | 18 |
| Datia                | India                  | 25              | N | 40 | 78               | E | 30 |
| Dartmoor             | England                | 50              | N | 38 | 3                | W | 58 |
| Delhi                | India                  | 28              | N | 38 | 77               | E | 17 |
| Derby                | England                | 52              | N | 50 | 1                | W | 28 |
| Davenport            | England                | 50              | N | 22 | 4                | W | 12 |
| Dhanbad              | India                  | 23              | N | 48 | 86               | E | 24 |
| Dharwar              | India                  | 15              | N | 29 | 75               | E | 5  |
| Dhubri               | India                  | 26              | N | 2  | 90               | E | 2  |
| Dibrugarh            | India                  | 27              | N | 30 | 95               | E | 0  |
| Dublin               | Ireland                | 53              | N | 20 | 6                | W | 18 |
| Dunkirk              | France                 | 51              | N | 3  | 2                | E | 26 |
| Durban               | S. Africa              | 29              | S | 58 | 30               | E | 53 |
| Durg                 | India                  | 21              | N | 11 | 81               | E | 20 |
| East London          | C. of G. Hope          | 32              | S | 58 | 27               | E | 52 |
| Ellichpur            | India                  | 21              | N | 12 | 77               | E | 8  |
| Elluru               | India                  | 16              | N | 43 | 81               | E | 9  |
| Emdem                | Germany                | 53              | N | 22 | 7                | E | 13 |
| Entebbe              | Uganda                 | 0               | N | 3  | 32               | E | 30 |
| Ernakulam            | India                  | 9               | N | 59 | 76               | E | 19 |
| Fatehabad            | India                  | 29              | N | 31 | 75               | E | 30 |
| Fatehpur             | India                  | 25              | N | 56 | 80               | E | 56 |
| Fiji Islands         | Pacific Ocean          | 17              | S | 20 | 179              | E | 0  |
| Florence             | Italy                  | 43              | N | 47 | 11               | E | 20 |
| Fyzabad              | India                  | 26              | N | 44 | 82               | E | 22 |
| Gangotri             | India                  | 30              | N | 58 | 78               | E | 59 |
| Gangtok              | Sikkim                 | 27              | N | 20 | 88               | E | 40 |
| Gauhati              | India                  | 26              | N | 5  | 91               | E | 55 |
| Gaya                 | India                  | 24              | N | 45 | 85               | E | 5  |
| Geneva               | Italy                  | 44              | N | 25 | 8                | E | 7  |
| Georgia              | U. S. A.               | 32              | N | 0  | 82               | W | 0  |
| Georgetown           | British Guineas        | 6               | N | 50 | 58               | W | 12 |

| <i>Name of Place</i> | <i>Name of Country</i> | <i>Latitude</i> |      | <i>Longitude</i> |      |
|----------------------|------------------------|-----------------|------|------------------|------|
| Georgetown           | Malaysia               | 5               | N 25 | 100              | E 19 |
| Ghazipur             | India                  | 25              | N 34 | 83               | E 35 |
| Ghazni               | Afghanistan            | 33              | N 37 | 68               | E 17 |
| Gibraltar            | Spain                  | 36              | N 7  | 5                | W 12 |
| Glasgow              | Scotland               | 55              | N 51 | 4                | W 16 |
| Goa                  | India                  | 15              | N 33 | 73               | E 59 |
| Golconda             | India                  | 17              | N 30 | 78               | E 2  |
| Gorakhpur            | India                  | 26              | N 47 | 83               | E 32 |
| Greenwich            | England                | 51              | N 29 | 0                | E 0  |
| Gulbarga             | India                  | 17              | N 20 | 76               | E 50 |
| Guntur               | India                  | 16              | N 23 | 80               | E 30 |
| Gwalior              | India                  | 26              | N 12 | 78               | E 10 |
| Hague                | Netherland             | 52              | N 7  | 4                | E 17 |
| Hairfax              | England                | 53              | N 43 | 1                | W 52 |
| Hamilton             | New Zealand            | 37              | S 47 | 175              | E 19 |
| Havana               | Cuba                   | 23              | N 0  | 82               | W 30 |
| Helsinki             | Finland                | 60              | N 15 | 25               | E 3  |
| Hiroshima            | Japan                  | 34              | N 30 | 132              | E 30 |
| Hissar               | India                  | 29              | N 12 | 75               | E 45 |
| Hobart               | Tasmania               | 42              | S 50 | 147              | E 15 |
| Hong-kong            | China                  | 22              | N 16 | 114              | E 7  |
| Hubli                | India                  | 15              | N 22 | 75               | E 15 |
| Hyderabad            | India                  | 17              | N 10 | 78               | E 20 |
| Imphal               | India                  | 24              | N 15 | 94               | E 0  |
| Indore               | India                  | 22              | N 42 | 75               | E 53 |
| Jabalpur             | India                  | 23              | N 10 | 79               | E 57 |
| Jaffna               | Ceylon                 | 9               | N 45 | 80               | E 2  |
| Jagannath            | India                  | 19              | N 59 | 86               | E 2  |
| Jaipur               | India                  | 26              | N 54 | 75               | E 52 |
| Jaisalmer            | India                  | 26              | N 56 | 70               | E 55 |
| Jalgaon              | India                  | 21              | N 0  | 75               | E 42 |
| Jamkhandi            | India                  | 16              | N 30 | 75               | E 17 |
| Jammu                | India                  | 32              | N 47 | 74               | E 50 |
| Jamnagar             | India                  | 22              | N 26 | 70               | E 2  |
| Jeddah               | Saudi Arabia           | 21              | N 29 | 39               | E 16 |
| Jerusalem            | Palestine              | 31              | N 47 | 35               | E 10 |
| Jhansi               | India                  | 25              | N 30 | 78               | W 36 |

| <i>Name of Place</i> | <i>Name of Country</i> | <i>Latitude</i> |   |    | <i>Longitude</i> |   |    |
|----------------------|------------------------|-----------------|---|----|------------------|---|----|
| Jodhpur              | India                  | 26              | N | 23 | 73               | E | 2  |
| Johannesburg         | U. of S. Africa        | 26              | S | 10 | 28               | E | 8  |
| Jorhat               | India                  | 26              | N | 45 | 94               | E | 20 |
| Jullundur            | India                  | 31              | N | 20 | 75               | E | 40 |
| Jwalamukhi           | India                  | 32              | N | 44 | 74               | E | 54 |
| Kabba                | Nigeria                | 7               | N | 45 | 6                | E | 45 |
| Kabul                | Afghanistan            | 34              | N | 28 | 69               | E | 18 |
| Kandla               | India                  | 23              | N | 3  | 70               | E | 10 |
| Kandy                | Ceylon                 | 7               | N | 18 | 80               | E | 43 |
| Kanpur               | India                  | 26              | N | 35 | 80               | E | 20 |
| Kansas City          | U. S. A.               | 39              | N | 3  | 94               | E | 39 |
| Kanyakumari          | India                  | 8               | N | 4  | 77               | E | 36 |
| Karachi              | Pakistan               | 24              | N | 53 | 67               | E | 0  |
| Karaikal             | India                  | 11              | N | 0  | 79               | E | 39 |
| Kathmandu            | Nepal                  | 27              | N | 43 | 85               | E | 19 |
| Khartoum             | Sudan                  | 15              | N | 31 | 32               | E | 35 |
| Kobe                 | Japan                  | 34              | N | 45 | 135              | E | 10 |
| Kohima               | Nagaland               | 23              | N | 35 | 94               | E | 10 |
| Kolar                | India                  | 13              | N | 12 | 78               | E | 15 |
| Kolhapur             | India                  | 16              | N | 43 | 74               | E | 15 |
| Kuala Lumpur         | Malaysia               | 3               | N | 9  | 101              | E | 41 |
| Kuching              | Sarawak                | 1               | N | 33 | 110              | E | 25 |
| Kumbakonam           | India                  | 11              | N | 0  | 78               | E | 40 |
| Kurnool              | India                  | 15              | N | 50 | 78               | E | 5  |
| Kuwait               | Saudi Arabia           | 29              | N | 30 | 47               | E | 30 |
| Lahore               | Pakistan               | 31              | N | 32 | 74               | E | 22 |
| Lancaster            | England                | 54              | N | 3  | 2                | E | 28 |
| Laos                 | Vietnam                | 17              | N | 45 | 105              | E | 0  |
| La Paz               | Bolivia                | 16              | S | 20 | 68               | W | 10 |
| Lashkar              | India                  | 26              | N | 0  | 77               | E | 0  |
| Leh                  | India                  | 34              | N | 15 | 77               | E | 35 |
| Leipzi               | Germany                | 51              | N | 20 | 12               | E | 21 |
| Leningrad            | U. S. S. R.            | 59              | N | 55 | 30               | E | 20 |
| Leopoldville         | Belgian Congo          | 4               | S | 20 | 15               | E | 15 |
| Lima                 | Peru                   | 12              | S | 0  | 77               | W | 0  |
| Limbdi               | India                  | 22              | N | 36 | 71               | E | 54 |
| Livingstone          | N. Rhodesia            | 17              | N | 50 | 25               | E | 50 |

| <i>Name of Place</i> | <i>Name of Country</i> | <i>Latitude</i> |   |    | <i>Longitude</i> |   |    |
|----------------------|------------------------|-----------------|---|----|------------------|---|----|
| London               | England                | 51              | N | 30 | 0                | W | 5  |
| Los Angeles          | U. S. A.               | 34              | N | 0  | 118              | W | 10 |
| Lucknow              | India                  | 26              | N | 50 | 81               | E | 0  |
| Ludhiana             | India                  | 30              | N | 57 | 75               | E | 56 |
| Madras               | India                  | 13              | N | 8  | 80               | E | 19 |
| Madrid               | Spain                  | 40              | N | 25 | 3                | W | 45 |
| Madurai              | India                  | 9               | N | 50 | 78               | E | 10 |
| Mahabaleshwar        | India                  | 17              | N | 56 | 73               | E | 43 |
| Mahe                 | India                  | 11              | N | 33 | 75               | E | 35 |
| Mahendragarh         | India                  | 28              | N | 24 | 76               | E | 12 |
| Malacca              | Malaysia               | 2               | N | 15 | 102              | E | 15 |
| Mandalay             | Burma                  | 22              | N | 0  | 96               | E | 15 |
| Mandi                | India                  | 31              | N | 39 | 76               | E | 58 |
| Mangalore            | India                  | 12              | N | 55 | 74               | E | 47 |
| Manila               | Phillippines           | 14              | N | 40 | 121              | E | 3  |
| Mantua               | Italy                  | 45              | N | 10 | 10               | E | 48 |
| Maskat and Oman      | Saudi Arabia           | 23              | N | 35 | 56               | E | 48 |
| Masulipatam          | India                  | 16              | N | 15 | 81               | E | 12 |
| Mathura              | India                  | 27              | N | 30 | 77               | E | 40 |
| Mecca                | Saudi Arabia           | 21              | N | 30 | 39               | E | 54 |
| Meerut               | India                  | 29              | N | 1  | 77               | E | 50 |
| Melbourne            | Victoria               | 37              | S | 40 | 145              | E | 0  |
| Mercara              | India                  | 12              | N | 30 | 75               | E | 45 |
| Mexico City          | Mexico                 | 19              | N | 20 | 99               | W | 10 |
| Midnapore            | India                  | 22              | N | 25 | 87               | E | 21 |
| Mirzapur             | India                  | 25              | N | 10 | 82               | E | 45 |
| Moradabad            | India                  | 28              | N | 50 | 78               | E | 50 |
| Moscow               | U. S. S. R.            | 55              | N | 45 | 37               | E | 35 |
| Multan               | India                  | 30              | N | 15 | 71               | E | 30 |
| Murshidabad          | India                  | 24              | N | 2  | 88               | E | 0  |
| Muzaffarpur          | India                  | 26              | N | 7  | 85               | E | 32 |
| Mysore               | India                  | 12              | N | 17 | 76               | E | 41 |
| Nagapattinam         | India                  | 10              | N | 46 | 79               | E | 51 |
| Nagasaki             | Japan                  | 32              | N | 47 | 129              | E | 50 |
| Nagpur               | India                  | 21              | N | ■  | 79               | E | 10 |
| Nairobi              | Kenya                  | 1               | S | 20 | 36               | E | 50 |
| Nahan                | India                  | 30              | N | 23 | 77               | E | 21 |

| <i>Name of Place</i> | <i>Name of Country</i> | <i>Latitude</i> | <i>Longitude</i> |
|----------------------|------------------------|-----------------|------------------|
| Nandyal              | India                  | 15 N 30         | 78 E 30          |
| Naples               | Italy                  | 40 N 50         | 14 E 5           |
| Nasik                | India                  | 20 N 2          | 73 E 50          |
| Natal                | S. Africa              | 29 S 0          | 30 E 30          |
| Nazareth             | Israel                 | 32 N 42         | 35 E 17          |
| Nellore              | India                  | 14 N 27         | 79 E 59          |
| New York             | U. S. A.               | 40 N 45         | 74 W 0           |
| Nicosia              | Cyprus                 | 35 N 10         | 33 E 25          |
| Olympia              | Greece                 | 37 N 40         | 21 E 20          |
| Osaka                | Japan                  | 34 N 40         | 135 E 30         |
| Oslo                 | Norway                 | 59 N 53         | 10 E 52          |
| Ottawa               | Canada                 | 59 N 50         | 80 W 0           |
| Oxford               | England                | 51 N 45         | 1 W 15           |
| Palghat              | India                  | 10 N 46         | 76 E 42          |
| Panama City          | Panama                 | 9 N 0           | 79 W 25          |
| Panipat              | India                  | 29 N 25         | 77 E 2           |
| Panjim               | India                  | 15 N 30         | 73 E 9           |
| Paris                | France                 | 48 N 50         | 2 E 20           |
| Patiala              | India                  | 30 N 23         | 76 E 26          |
| Patna                | India                  | 25 N 35         | 85 E 18          |
| Peking               | China                  | 39 N 50         | 116 E 20         |
| Peshawar             | Pakistan               | 34 N 2          | 71 E 37          |
| Prague               | Czechoslovakia         | 50 N 5          | 14 E 22          |
| Pondicherry          | India                  | 11 N 59         | 79 E 50          |
| Poona                | India                  | 18 N 29         | 73 E 57          |
| Port Blair           | Andaman Islands        | 11 N 40         | 92 E 30          |
| Pretoria             | U. of S. Africa        | 25 S 44         | 28 E 12          |
| Punaka               | Bhutan                 | 27 N 30         | 90 E 0           |
| Puri                 | India                  | 19 N 50         | 85 E 58          |
| Quebec               | Canada                 | 46 N 52         | 71 W 13          |
| Quetta               | Baluchistan            | 30 N 15         | 66 E 55          |
| Quilon               | India                  | 8 N 54          | 76 E 38          |
| Raichur              | India                  | 16 N 10         | 77 E 20          |
| Raigarh              | India                  | 21 N 56         | 83 E 25          |
| Rajahmundry          | India                  | 17 N 1          | 81 E 48          |
| Rajkot               | India                  | 22 N 15         | 70 E 56          |
| Rameswaram           | India                  | 9 N 18          | 79 E 28          |

| <i>Name of Place</i> | <i>Name of Country</i> | <i>Latitude</i> |   |    | <i>Longitude</i> |   |    |
|----------------------|------------------------|-----------------|---|----|------------------|---|----|
| Ranchi               | India                  | 23              | N | 19 | 85               | E | 27 |
| Rangoon              | Burma                  | 16              | N | 45 | 96               | E | 20 |
| Rawalpindi           | Pakistan               | 33              | N | 38 | 73               | E | 8  |
| Rio de Janeiro       | Brazil                 | 23              | S | 0  | 43               | W | 12 |
| Riyadh               | Saudi Arabia           | 24              | N | 41 | 46               | E | 42 |
| Rohtak               | India                  | 28              | N | 55 | 76               | E | 43 |
| Rome                 | Italy                  | 41              | N | 54 | 12               | E | 30 |
| Saar, R              | Germany                | 49              | N | 28 | 6                | E | 45 |
| Saharanpur           | India                  | 29              | N | 58 | 77               | E | 33 |
| Saigon               |                        | 10              | N | 58 | 106              | E | 40 |
| Salem                | India                  | 11              | N | 39 | 78               | E | 12 |
| Salisbury            | S. Rhodesia            | 17              | S | 50 | 31               | E | 2  |
| Salt Lake City       | U. S. A.               | 40              | N | 55 | 112              | W | 0  |
| Samarkhand           | Afghanistan            | 39              | N | 40 | 67               | E | 0  |
| Sambalpur            | India                  | 21              | N | 30 | 84               | E | 3  |
| San Francisco        | U. S. A.               | 38              | N | 0  | 122              | W | 24 |
| Sangli               | India                  | 16              | N | 55 | 74               | E | 33 |
| Santiago             | Chile                  | 33              | S | 24 | 70               | W | 50 |
| Sarnath              | India                  | 25              | N | 28 | 83               | E | 2  |
| Seoul                | Korea                  | 37              | N | 31 | 127              | E | 6  |
| Shangai              | China                  | 31              | N | 15 | 121              | E | 30 |
| Sheffield            | England                | 53              | N | 23 | 1                | W | 27 |
| Shillong             | India                  | 25              | N | 30 | 92               | E | 0  |
| Shimoga              | India                  | 13              | N | 57 | 75               | E | 32 |
| Sholapur             | India                  | 17              | N | 43 | 75               | E | 56 |
| Simla                | India                  | 31              | N | 2  | 77               | E | 15 |
| Singapore            | Singapore              | 1               | N | 17 | 103              | E | 51 |
| Sofia                | Bulgaria               | 42              | N | 45 | 23               | E | 20 |
| Srinagar             | India                  | 34              | N | 12 | 74               | E | 50 |
| Srirangapatnam       | India                  | 12              | N | 30 | 76               | E | 40 |
| Stockholm            | Sweden                 | 59              | N | 17 | 18               | E | 3  |
| Surat                | India                  | 21              | N | 12 | 72               | E | 55 |
| Suva                 | Fiji                   | 18              | S | 0  | 178              | E | 20 |
| Sydney               | New South Wales        | 33              | S | 53 | 151              | E | 10 |
| Taihoku              | Taiwan                 | 25              | N | 2  | 121              | E | 31 |
| Teheran              | Iran                   | 35              | N | 44 | 51               | E | 30 |
| Tehri Garhwal        | India                  | 30              | N | 27 | 78               | E | 33 |



| <i>Name of Place</i> | <i>Name of Country</i> | <i>Latitude</i> |      | <i>Longitude</i> |      |  |
|----------------------|------------------------|-----------------|------|------------------|------|--|
| Tejpur               | India                  | 26              | N 37 | 92               | E 50 |  |
| Thanjavur            | India                  | 10              | N 45 | 79               | E 17 |  |
| Tirunelveli          | India                  | 8               | N 45 | 77               | E 45 |  |
| Tirupati             | India                  | 13              | N 45 | 79               | E 30 |  |
| Tokyo                | Japan                  | 35              | N 45 | 139              | E 45 |  |
| Toranto              | Italy                  | 40              | N 28 | 17               | E 13 |  |
| Travancore           | India                  | 9               | N 20 | 77               | E 0  |  |
| Trichinopoly         | India                  | 10              | N 30 | 76               | E 18 |  |
| Tripolitania         | Libya                  | 30              | N 56 | 13               | E 30 |  |
| Trivandrum           | India                  | 8               | N 31 | 77               | E 0  |  |
| Tumkur               | India                  | 13              | N 18 | 77               | E 12 |  |
| Tunis                | Tunisia                | 36              | N 42 | 10               | E 6  |  |
| Tuticorin            | India                  | 8               | N 50 | 78               | E 12 |  |
| Udaipur              | India                  | 24              | N 36 | 73               | E 44 |  |
| Udipi                | India                  | 13              | N 25 | 74               | E 42 |  |
| Ujjain               | India                  | 23              | N 9  | 75               | E 43 |  |
| Vaduz                | Lichtenstein           | 47              | N 8  | 9                | E 31 |  |
| Vaishnava Devi       | India                  | 33              | N 0  | 74               | W 59 |  |
| Varanasi             | India                  | 25              | N 18 | 83               | E 0  |  |
| Vatican City         | Italy                  | 38              | N 38 | 15               | E 50 |  |
| Vienna               | Austria                | 48              | N 12 | 16               | E 22 |  |
| Vijayawada           | India                  | 15              | N 14 | 76               | E 28 |  |
| Visakhapatnam        | India                  | 17              | N 45 | 83               | E 27 |  |
| Warangal             | India                  | 17              | N 58 | 79               | E 45 |  |
| Wardha               | India                  | 20              | N 45 | 78               | E 39 |  |
| Warsaw               | Poland                 | 52              | N 13 | 21               | E 0  |  |
| Washington           | U. S. A.               | 38              | N 50 | 77               | W 0  |  |
| Waterloo             | Belgium                | 50              | N 44 | 4                | E 23 |  |
| Wellington           | New Zealand            | 41              | S 8  | 176              | E 46 |  |
| Xanthe               | Greece                 | 41              | N 10 | 24               | E 58 |  |
| Yemen                | Saudi Arabia           | 15              | N 0  | 44               | E 0  |  |
| Zanzibar             | Zanzibar               | 6               | S 2  | 39               | E 20 |  |
| Zurich               | Switzerland            | 47              | N 22 | 8                | E 32 |  |

TABLE VIII

*Table of Standard Times*

| Place   | Fast (+) or<br>Slow (-) of<br>Greenwich |    |      | Date of<br>Adoption |
|---|---|----|------|---------------------|
|   | h.                                      | m. | s.   |                     |
| Aden  | +                                       | 3  | 0 0  | Recent              |
| Afghanistan   | +                                       | 4  | 30 0 | Recent              |
| Africa :  |   |    |      |                     |
| Caméroons, Fr. Eq. Africa,<br>Tunisia, Angola, Libya,*<br>Nigeria   | +                                       | 1  | 0 0  | Sept. 1905          |
| Egypt*, Sudan, Rhodesia,<br>Nyasaland, Union of<br>S. Africa, Mozambique  | +                                       | 2  | 0 0  | 1930                |
| Ethiopia, Kenya, Uganda,<br>Tanganyika, Madagaskar,<br>Zanzibar Islands   | +                                       | 3  | 0 0  | Recent              |
|   | +                                       | 2  | 45 0 | Recent              |
| Algeria*, Morocco,<br>Gold Coast, Ivory Coast,<br>French Sudan, Dahoney*,<br>Togoland, Tangier, Sierra<br>Leone | +                                       | 0  | 0 0  | March 1911          |
| Liberia   | -                                       | 0  | 45 0 | Recent              |
| Port Guinea, Rio-de-oro*,<br>French Guinea*,<br>Mauretanian*, Senegal*  | -                                       | 1  | 0 0  | Recent              |
| Leopoldville, Coquilhatville  | +                                       | 1  | 0 0  | Recent              |
| Africa :  |   |    |      |                     |
| Orientale, Kivu, Kasai,<br>Ruanda, Urundi, Katanga  | +                                       | 2  | 0 0  | Recent              |

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\* Summer Time observed.

| Place   | Fast (+) or<br>Slow (-) of<br>Greenwich<br>h. m. s. | Date of<br>Adoption |
|---|---|---------------------|
| <b>America (U.S.A.):</b>                      |   |                     |
| Eastern Time* E.T.‡                           | - 5 0 0   | Nov. 1883           |
| Central Time* C.T.‡                           | - 6 0 0   | "                   |
| Mountain Time* M.T.‡                          | - 7 0 0   | "                   |
| Pacific Time* P.T.‡                           | - 8 0 0   | "                   |
| <b>Alaska:</b>                                |   |                     |
| Ketchikan to Skagway                          | - 8 0 0   | "                   |
| Skagway to 141° W.                            | - 9 0 0   | "                   |
| 141° W. to 162 W.                             | - 10 0 0  | "                   |
| 162° W. to Western Tip                        | - 11 0 0  | "                   |
| <b>America (South):</b>                       |   |                     |
| Equador, Columbia, Peru,<br>Territory of Arc  | 5 0 0   | "                   |
| Venezuallah                                   | - 4 30 0  | Recent              |
| Western Brazil, Bolivia,<br>Argentina*, Chile | - 4 0 0   | May 1920            |
| British Guiana &<br>Dutch Guiana              | - 3 45 0  | Recent              |
| French Guiana: Paraguay                       | - 4 0 0   | Recent              |
| Uruguay                                       | - 3 30 0  | May 1920            |
| Eastern Brazil                                | - 3 0 0   | Recent              |
| <b>Australia:</b>                             |   |                     |
| Victoria, N.S. Wales,<br>Queensland, Tasmania | + 10 0 0  | Feb. 1895           |
| South Australia, N. Territory                 | + 9 30 0  | "                   |
| Western Australia:                            | + 8 0 0   | "                   |
| New Zealand                                   | + 12 0 0  | "                   |

\* Summer Time observed.

‡ War time (+ 1 hr.) 9-2-1942 to 30-9-1945.

| Place                    | Fast (+) or<br>Slow (-) of<br>Greenwich |    |      | Date of<br>Adoption |
|--------------------------|---|----|------|---------------------|
|                          | h.                                      | m. | s.   |                     |
| Austria : Hungary        | +                                       | 1  | 0 0  | Oct. 1895           |
| Azores*                  | -                                       | 2  | 0 0  | Recent              |
| Ascension Island         | -                                       | 0  | 0 0  | "                   |
| Alentian Islands         | -                                       | 11 | 0 0  | "                   |
| Albania                  | +                                       | 1  | 0 0  | "                   |
| Bahrein Islands*         | +                                       | 3  | 0 0  | "                   |
| Bangla Desh              | +                                       | 5  | 0 0  | Oct. 1951           |
| Belgium*                 | -                                       | 0  | 0 0  | Recent              |
| Bermudas Islands         | -                                       | 4  | 0 0  | "                   |
| Borneo Islands           | +                                       | 8  | 0 0  | Oct. 1904           |
| British Honduras         | -                                       | 6  | 0 0  | "                   |
| Bulgaria                 | +                                       | 2  | 0 0  | "                   |
| Burma                    | +                                       | 6  | 30 0 | 1906                |
| Canada :                 |   |    |      |                     |
| Newfoundland             | -                                       | 3  | 30 0 | Nov. 1883           |
| Atlantic Time. A.T.*     | -                                       | 4  | 0 0  | "                   |
| Eastern Time : E.T.*     | -                                       | 5  | 0 0  | "                   |
| Central Time : C.T.*     | -                                       | 6  | 0 0  | "                   |
| Mountain Time : M.T.*    | -                                       | 7  | 0 0  | Nov. 1883           |
| Pacific Time : P.T.*     | -                                       | 8  | 0 0  | "                   |
| Canary Islands*          | -                                       | 1  | 0 0  | Recent              |
| Cape Verde Islands       | -                                       | 2  | 0 0  | "                   |
| Caroline Islands General | +                                       | 10 | 0 0  | "                   |
| Kasaie, Pinglepag        | +                                       | 10 | 0 0  | "                   |
| Truk                     | +                                       | 11 | 0 0  | Recent              |
| Ceylon                   | +                                       | 5  | 30 0 | 1906                |

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\* Summer Time observed.

| Place                       | Fast (+) —<br>Slow (–) of<br>Greenwich |    |      | Date of<br>Adoption |
|-----------------------------|--|----|------|---------------------|
|                             | h. m. s.                               |    |      |                     |
| China :                     |  |    |      |                     |
| Kung Lung (Mountain)        | +                                      | 5  | 30 0 | Jan. 1903           |
| Sinyang (Tibet)             | +                                      | 6  | 0 0  | "                   |
| Lungtsu (Szchuen)*          | +                                      | 7  | 0 0  | "                   |
| Chung Yuan (Central)        |  |    |      |                     |
| Hong Kong*                  | +                                      | 8  | 0 0  | "                   |
| Chang Pei (Mountain)        | +                                      | 8  | 30 0 | "                   |
| Cocos-Keeling Islands       |  |    |      |                     |
| (Indian Ocean)              | +                                      | 11 | 30 0 | Recent              |
| Cook Islands (Pac. Ocean)   | +                                      | 10 | 30 0 | "                   |
| Corsica Islands (Med. Sea)* | +                                      | 0  | 0 0  | "                   |
| Costa Rica Isl.             |  |    |      |                     |
| (Near Panama)               | –                                      | 6  | 0 0  | "                   |
| Cuba Islands (West Indies)  | –                                      | 5  | 0 0  | "                   |
| Cyprus Islands (Med. Sea)   | –                                      | 2  | 0 0  | "                   |
| Czechoslovakia              | +                                      | 1  | 0 0  | "                   |
| Denmark                     | +                                      | 1  | 0 0  | Jan. 1894           |
| Ecuador                     | –                                      | 5  | 0 0  | "                   |
| England                     | –                                      | 0  | 0 0  | 1880                |
| Estonia : U.S.S.R.*         | +                                      | 2  | 0 0  | Recent              |
| Falkland Islands            | –                                      | 4  | 0 0  | "                   |
| Fiji Islands                | +                                      | 12 | 0 0  | "                   |
| Finland                     | +                                      | 2  | 0 0  | May 1921            |
| Formosa*                    | +                                      | 8  | 0 0  | Jan. 1896           |
| Fernando Islands            | –                                      | 2  | 0 0  | Recent              |
| France*                     | –                                      | 0  | 0 0  | May 1911            |
| Gambia                      | –                                      | 0  | 0 0  | Recent              |

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\* Summer Time observed.

| Place                                     | Fast (+) or<br>Slow (-) of<br>Greenwich |    |      | Date of<br>Adoption |
|---|---|----|------|---------------------|
|   | h.                                      | m. | s.   |                     |
| Germany                                   | +                                       | 1  | 0 0  | April 1892          |
| Gibraltar*                                | +                                       | 0  | 0 0  | "                   |
| Greece and Crete                          | +                                       | 2  | 0 0  | July 1916           |
| Grenada Islands (W. Indies)               | -                                       | 4  | 0 0  | Recent              |
| Greenland : Scoresby Sound                | -                                       | 2  | 0 0  | "                   |
| Angmagssalik, W. Coast<br>excluding Thule | -                                       | 3  | 0 0  | "                   |
| Thule                                     | -                                       | 4  | 0 0  | "                   |
| Guam Islands                              | +                                       | 10 | 0 0  | "                   |
| Guatemala (N. America)                    | -                                       | 6  | 0 0  | 1883                |
| Haiti                                     | -                                       | 5  | 0 0  | Recent              |
| Hawaii Islands                            | -                                       | 10 | 0 0  | "                   |
| Honduras (Near Panama)                    | -                                       | 6  | 0 0  | Recent              |
| Hungary                                   | +                                       | 1  | 0 0  | May 1892            |
| Iceland*                                  | -                                       | 1  | 0 0  | Jan. 1906           |
| India : General†                          | +                                       | 5  | 30 0 | 1-1-1906            |
| Calcutta (L.M.T.)                         | +                                       | 5  | 53 0 |                     |
|   |   |    |      | upto 1-10-1941      |
| Indo-China : Cambodia,                    |   |    |      |                     |
| Laos, Vietnam                             | +                                       | 7  | 0 0  | 1904                |
| Indonesia : Sumatra (North)               | +                                       | 6  | 30 0 | Recent              |
| Sumatra (South)                           | +                                       | 7  | 0 0  | "                   |
| Java, Borneo (Indonesia)                  | +                                       | 7  | 30 0 | "                   |
| Celebes                                   | +                                       | 8  | 0 0  | "                   |
| Molucca Islands                           | +                                       | 8  | 30 0 | "                   |
| Iraq                                      | +                                       | 3  | 0 0  | "                   |
| Ireland*                                  | +                                       | 0  | 0 0  | Oct. 1915           |

\* Summer Time observed.

† War time (+ 1 hr.) 1-9-1942 to 15-10-1945.

| Place                                 | Fast (+) or<br>Slow (-) of<br>Greenwich<br>h. m. s. | Date of<br>Adoption |
|---------------------------------------|---|---------------------|
| Israel*                               | + 2 0 0   | Recent              |
| Italy (and Sicily)                    | + 1 0 0   | Nov. 1893           |
| Japan                                 | + 9 0 0   | 1st Jan. 1888       |
| Jordan                                | + 2 0 0   | Recent              |
| Kamaran Islands                       | + 3 0 0   | "                   |
| Korean Democratic Republic<br>(North) | + 8 30 0  | "                   |
| Korea (South)*                        | + 8 30 0  | Dec. 1904           |
| Kuweit (Persian Gulf)                 | + 3 0 0   | Recent              |
| Latvia* (U.S.S.R.)                    | + 2 0 0   | "                   |
| Lebanon (Malayan Archi.)              | + 2 0 0   | "                   |
| Lithuania                             | + 1 0 0   | "                   |
| Luxemburg                             | + 1 0 0   | "                   |
| Madagascar                            | + 3 0 0   | "                   |
| Madeire* (Brazil)                     | - 1 0 0   | "                   |
| Malaya (See footnote)                 | + 7 30 0  | "                   |
| Malta Islands                         | + 1 0 0   | "                   |
| Mauritius Islands                     | + 4 0 0   | "                   |
| Mexico :                              |   |                     |
| Centtal Time C.T.                     | - 6 0 0   | Nov. 1883           |
| Mountain Time M.T.                    | - 7 0 0   | "                   |
| Pacific Time P.T.                     | + 8 0 0   | "                   |
| Marianne Islands                      | + 9 0 0   | Recent              |
| Marqueass Islands                     | - 10 0 0  | "                   |
| Martinique Islands                    | - 4 0 0   | "                   |

\* Summer Time observed.

Malaya: Upto 31-12-1932: + 7 hrs.

" 31-8-1941: + 7/20 hrs.

Now: + 7/30 hrs.



|                      | Fast (+) or<br>Slow (-) of<br>Greenwich<br>h. m. s. | Date of<br>Adoption |
|----------------------|---|---------------------|
| Monaco               | - 0 0 0   | Recent              |
| Mozambique           | + 2 0 0   | "                   |
| Netherlands*         | 0 0 0   | "                   |
| Netherlands Guinea   | - 3 40 0  | "                   |
| New Caledonia        | + 11 0 0  | "                   |
| Newfoundland         | - 3 30 0  | "                   |
| New Guinea (British) | + 10 0 0  | April 1911          |
| " (Netherland)       | + 9 30 0  | "                   |
| New Herbrides        | + 11 0 0  | Recent              |
| New Zealand          | + 12 0 0  | "                   |
| Nicaragua            | - 5 45 0  | "                   |
| Norfolkland          | + 11 30 0   | "                   |
| Norway               | + 1 0 0   | Jan. 1895           |
| Oman                 | + 3 30 0  | Recent              |
| Pakistan             | + 6 0 0   | Oct. 1951           |
| Panama Canal Zone    | - 5 0 0   | 1911                |
| Papua                | + 10 0 0  | Recent              |
| Persia               | + 3 30 0  | "                   |
| Peseaderes Islands   | + 8 0 0   | "                   |
| Philippine Islands   | + 8 0 0   | May 1899            |
| Poland*              | + 2 0 0   | Sept. 1919          |
| Portugal*            | - 0 0 0   | 1911                |
| Princess Islands     | - 0 0 0   | "                   |
| Puerto Rico          | - 4 0 0   | "                   |
| Reunion Islands      | + 4 0 0   | "                   |
| Roumania             | + 2 0 0   | "                   |
| St. Lucia            | - 4 0 0   | "                   |

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\* Summer Time observed.

| Place                          | Fast (+) or<br>Slow (-) of<br>Greenwich<br>h. m. s. | Date of<br>Adoption |
|--------------------------------|---|---------------------|
| St. Pierre                     | - 4 0 0   | 1911                |
| St. Thomas Islands             | G.M.T.  | "                   |
| St. Vincent Islands            | - 4 0 0   | "                   |
| Salvador                       | - 8 0 0   | "                   |
| Samoa Islands                  | - 11 0 0  | "                   |
| Sandwich Islands               | G.M.T.  | "                   |
| Sarawak                        | + 8 0 0   | "                   |
| Sardinia                       | + 1 0 0   | Recent              |
| Saudi Arabia except<br>Dhahran | + 3 0 0   | "                   |
| Dhahran*                       | + 4 0 0   | "                   |
| Scotland                       | G.M.T.  | 1880                |
| Siam (Thailand)                | + 7 0 0   | April 1920          |
| Solomon Islands                | + 11 0 0  | Recent              |
| Somaliland                     | + 8 0 0   | "                   |
| Serbia                         | + 1 0 0   | "                   |
| Seychells Islands              | + 4 0 0   | "                   |
| Spain*                         | G.M.T.  | Jan. 1901           |
| Spanish Guinea*                | G.M.T.  | Recent              |
| Society Islands                | - 10 0 0  | "                   |
| Sweden                         | + 1 0 0   | "                   |
| Switzerland                    | + 1 0 0   | June 1894           |
| Syria*                         | + 2 0 0   | Recent              |
| Tahiti                         | - 10 0 0  | "                   |
| Tonga (Friendly Islands)       | + 12 20 0   | "                   |
| Tunisia                        | + 1 0 0   | "                   |
| Tasmania                       | + 10 0 0  | "                   |
| Turkey                         | + 2 0 0   | "                   |

\* Summer Time observed.

| Place                        | Fast (+) or<br>Slow (-) of<br>Greenwich<br>h. m. s. | Date of<br>Adoption |
|------------------------------|---|---------------------|
| U.S.S.R.                     |   |                     |
| Moscow, Ukrain & West        | + 2 0 0   | Recent              |
| Black Sea to Caspician Sea*+ | 3 0 0   | "                   |
| Sverdlovsk, West Kazak*      | + 4 0 0   | "                   |
| Omsk, East Kazak*            | + 5 0 0   | "                   |
| Krasnoyarsk, New Syberia*+   | 6 0 0   | "                   |
| Irkutsk*                     | + 7 0 0   | "                   |
| Yakutsk, Chitinsk*           | + 8 0 9   | "                   |
| Khabarovsk, Vladivostok*+    | 9 0 0   | "                   |
| Magadan, Sakalin Islands*+   | 10 0 9  | "                   |
| Peiropavlovsk,               |   |                     |
| Kamchatsiky*                 | + 11 0 0  | "                   |
| Anadyr                       | + 12 0 0  | "                   |
| Vatican Islands              | + 1 0 0   | "                   |
| West Indies' Barbados,       |   |                     |
| Guadeloupe, Leeward Isls.,   |   |                     |
| Martinique, Tobago,          |   |                     |
| Trinidad, Windward Isls.,    | - 4 0 0   | "                   |
| Curacao                      | - 4 30 0  | "                   |
| Dominican Republic           | - 5 0 0   | "                   |
| Bahamas, Jamaica             | - 5 0 0   | "                   |
| Wales                        | G.M.T.  | 1880                |
| Yugosllovakia                | + 1 0 0   | Recent              |
| Yokon                        | - 9 0 0   | Aug. 1900           |

\* Summer Time observed.

The Summer Time Bill lays down the following rule:—"The period of Summer Time shall be the period beginning at two o'clock, Greenwich mean time, in the morning of the day next following the **THIRD SATURDAY IN APRIL**, or if that day is Easter Day, the day next following the Second Saturday in April, and ending at two o'clock, Greenwich mean time, in the morning of the day next following the **THIRD SATURDAY IN SEPTEMBER.**"

The Bill will not be permanent but will be renewable annually.

**TABLE IX**  
**Ayanamsa (1891 to 2000 A.D.)**

| Year | Ayanamsa | Year | Ayanamsa | Year | Ayanamsa |
|------|----------|------|----------|------|----------|
| 1891 | 20 53 17 | 28   | 21 24 20 | 65   | 21 55 22 |
| 92   | 20 54 8  | 29   | 21 25 10 | 66   | 21 56 12 |
| 93   | 20 54 58 | 1930 | 21 26 00 | 67   | 21 57 3  |
| 94   | 20 55 48 | 31   | 21 26 51 | 68   | 21 57 53 |
| 95   | 20 56 39 | 32   | 21 27 41 | 69   | 21 58 43 |
| 96   | 20 57 29 | 33   | 21 28 31 | 1970 | 21 59 34 |
| 97   | 20 58 19 | 34   | 21 29 22 | 71   | 22 0 24  |
| 98   | 20 59 10 | 35   | 21 30 12 | 72   | 22 1 14  |
| 99   | 21 0 0   | 36   | 21 31 2  | 73   | 22 2 5   |
| 1900 | 21 0 50  | 37   | 21 31 53 | 74   | 22 2 55  |
| 1    | 21 1 41  | 38   | 21 32 43 | 75   | 22 3 45  |
| 2    | 21 2 31  | 39   | 21 33 33 | 76   | 22 4 36  |
| 3    | 21 3 21  | 1940 | 21 34 24 | 77   | 22 5 27  |
| 4    | 21 4 12  | 41   | 21 35 14 | 78   | 22 6 17  |
| 5    | 21 5 2   | 42   | 21 36 4  | 79   | 22 7 7   |
| 6    | 21 5 52  | 43   | 21 36 55 | 1980 | 22 7 57  |
| 7    | 21 6 43  | 44   | 21 37 45 | 81   | 22 8 47  |
| 8    | 21 7 33  | 45   | 21 38 35 | 82   | 22 9 38  |
| 9    | 21 8 23  | 46   | 21 39 26 | 83   | 22 10 28 |
| 1910 | 21 9 14  | 47   | 21 40 16 | 84   | 22 11 18 |
| 11   | 21 10 4  | 48   | 21 41 6  | 85   | 22 12 9  |
| 12   | 21 10 54 | 49   | 21 41 57 | 86   | 22 12 59 |
| 13   | 21 11 45 | 1950 | 21 42 47 | 87   | 22 13 49 |
| 14   | 21 12 35 | 51   | 21 43 37 | 88   | 22 14 40 |
| 15   | 21 13 25 | 52   | 21 44 28 | 89   | 22 15 30 |
| 16   | 21 14 16 | 53   | 21 45 18 | 1990 | 22 16 20 |
| 17   | 21 15 6  | 54   | 21 46 8  | 91   | 22 17 11 |
| 18   | 21 15 56 | 55   | 21 46 59 | 92   | 22 18 1  |
| 19   | 21 16 47 | 56   | 21 47 49 | 93   | 22 18 51 |
| 1920 | 21 17 37 | 57   | 21 48 39 | 94   | 22 19 42 |
| 21   | 21 18 27 | 58   | 21 49 30 | 95   | 22 20 32 |
| 22   | 21 19 18 | 59   | 21 50 20 | 96   | 22 21 22 |
| 23   | 21 20 8  | 1960 | 21 51 10 | 97   | 22 22 13 |
| 24   | 21 20 58 | 61   | 21 52 1  | 98   | 22 23 3  |
| 25   | 21 21 49 | 62   | 21 52 51 | 99   | 22 23 53 |
| 26   | 21 22 39 | 63   | 21 53 41 | 2000 | 22 24 44 |
| 27   | 21 23 29 | 64   | 21 54 32 |      |          |

**TABLE X**  
**Proportional Logarithms for finding planets' places**

| Proportional Logarithms for finding products, places |                  |        |        |      |      |      |      |      |      |      |      |      |      |
|--|------------------|--------|--------|------|------|------|------|------|------|------|------|------|------|
| Min.   | Degrees or Hours |        |        |      |      |      |      |      |      |      |      |      | Min. |
|  | 0                | 1      | 2      | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   |      |
| 0  | —                | 1.3802 | 1.0792 | 9031 | 7781 | 6812 | 6021 | 5351 | 4771 | 4260 | 3802 | 3388 | 0    |
| 1  | 3.1584           | 1.3730 | 1.0756 | 9007 | 7763 | 6798 | 6009 | 5341 | 4762 | 4252 | 3795 | 3382 | 1    |
| 2  | 2.8573           | 1.3660 | 1.0720 | 8983 | 7745 | 6784 | 5997 | 5330 | 4753 | 4244 | 3788 | 3375 | 2    |
| 3  | 2.6812           | 1.3590 | 1.0685 | 8959 | 7728 | 6769 | 5985 | 5320 | 4744 | 4236 | 3780 | 3368 | 3    |
| 4  | 2.5563           | 1.3522 | 1.0649 | 8935 | 7710 | 6755 | 5973 | 5310 | 4735 | 4228 | 3773 | 3362 | 4    |
| 5  | 2.4594           | 1.3454 | 1.0614 | 8912 | 7692 | 6741 | 5961 | 5300 | 4726 | 4220 | 3766 | 3355 | 5    |
| 6  | 2.3802           | 1.3388 | 1.0580 | 8888 | 7674 | 6726 | 5949 | 5289 | 4717 | 4212 | 3759 | 3349 | 6    |
| 7  | 2.3133           | 1.3323 | 1.0546 | 8865 | 7657 | 6712 | 5937 | 5279 | 4708 | 4204 | 3752 | 3342 | 7    |
| 8  | 2.2553           | 1.3258 | 1.0511 | 8842 | 7639 | 6698 | 5925 | 5269 | 4699 | 4196 | 3745 | 3336 | 8    |
| 9  | 2.2041           | 1.3195 | 1.0478 | 8819 | 7622 | 6684 | 5913 | 5259 | 4690 | 4188 | 3737 | 3329 | 9    |
| 10   | 2.1584           | 1.3133 | 1.0444 | 8796 | 7604 | 6670 | 5902 | 5249 | 4682 | 4180 | 3730 | 3323 | 10   |
| 11   | 2.1170           | 1.3071 | 1.0411 | 8773 | 7587 | 6656 | 5890 | 5239 | 4673 | 4172 | 3723 | 3316 | 11   |
| 12   | 2.0792           | 1.3010 | 1.0378 | 8751 | 7570 | 6642 | 5878 | 5229 | 4664 | 4164 | 3716 | 3310 | 12   |
| 13   | 2.0444           | 1.2950 | 1.0345 | 8728 | 7552 | 6628 | 5866 | 5219 | 4655 | 4156 | 3709 | 3303 | 13   |
| 14   | 2.0122           | 1.2891 | 1.0313 | 8706 | 7535 | 6614 | 5855 | 5209 | 4646 | 4148 | 3702 | 3297 | 14   |
| 15   | 1.9823           | 1.2833 | 1.0280 | 8683 | 7518 | 6600 | 5843 | 5199 | 4638 | 4141 | 3695 | 3291 | 15   |
| 16   | 1.9542           | 1.2775 | 1.0248 | 8661 | 7501 | 6587 | 5832 | 5189 | 4629 | 4133 | 3688 | 3284 | 16   |
| 17   | 1.9276           | 1.2719 | 1.0216 | 8639 | 7484 | 6573 | 5820 | 5179 | 4620 | 4125 | 3681 | 3278 | 17   |
| 18   | 1.9031           | 1.2663 | 1.0185 | 8617 | 7467 | 6559 | 5809 | 5169 | 4611 | 4117 | 3674 | 3271 | 18   |
| 19   | 1.8796           | 1.2607 | 1.0153 | 8595 | 7451 | 6546 | 5797 | 5159 | 4603 | 4109 | 3667 | 3265 | 19   |
| 20   | 1.8573           | 1.2553 | 1.0122 | 8573 | 7434 | 6532 | 5786 | 5149 | 4594 | 4102 | 3660 | 3258 | 20   |
| 21   | 1.8361           | 1.2496 | 1.0091 | 8552 | 7417 | 6519 | 5774 | 5139 | 4585 | 4094 | 3653 | 3252 | 21   |
| 22   | 1.8159           | 1.2445 | 1.0061 | 8530 | 7401 | 6505 | 5763 | 5129 | 4577 | 4086 | 3646 | 3246 | 22   |
| 23   | 1.7966           | 1.2393 | 1.0030 | 8509 | 7384 | 6492 | 5752 | 5120 | 4568 | 4079 | 3639 | 3239 | 23   |
| 24   | 1.7781           | 1.2341 | 1.0000 | 8487 | 7368 | 6478 | 5740 | 5110 | 4559 | 4071 | 3632 | 3233 | 24   |
| 25   | 1.7604           | 1.2289 | 0.9970 | 8466 | 7351 | 6465 | 5729 | 5100 | 4551 | 4063 | 3625 | 3227 | 25   |
| 26   | 1.7434           | 1.2239 | 0.9940 | 8445 | 7335 | 6451 | 5718 | 5090 | 4542 | 4055 | 3618 | 3220 | 26   |
| 27   | 1.7270           | 1.2188 | 0.9910 | 8424 | 7318 | 6438 | 5706 | 5081 | 4534 | 4048 | 3611 | 3214 | 27   |
| 28   | 1.7112           | 1.2139 | 0.9881 | 8403 | 7302 | 6425 | 5695 | 5071 | 4525 | 4040 | 3604 | 3208 | 28   |
| 29   | 1.6960           | 1.2090 | 0.9852 | 8382 | 7285 | 6412 | 5684 | 5061 | 4516 | 4032 | 3597 | 3201 | 29   |
| 30   | 1.6812           | 1.2041 | 0.9823 | 8361 | 7270 | 6398 | 5673 | 5051 | 4508 | 4025 | 3590 | 3195 | 30   |
| 31   | 1.6670           | 1.1993 | 0.9794 | 8341 | 7254 | 6385 | 5662 | 5042 | 4499 | 4017 | 3583 | 3189 | 31   |
| 32   | 1.6532           | 1.1946 | 0.9765 | 8320 | 7238 | 6372 | 5651 | 5032 | 4491 | 4010 | 3576 | 3183 | 32   |
| 33   | 1.6398           | 1.1899 | 0.9737 | 8300 | 7222 | 6359 | 5640 | 5023 | 4482 | 4002 | 3570 | 3176 | 33   |
| 34   | 1.6269           | 1.1852 | 0.9708 | 8279 | 7206 | 6346 | 5629 | 5013 | 4474 | 3994 | 3563 | 3170 | 34   |
| 35   | 1.6143           | 1.1806 | 0.9680 | 8259 | 7190 | 6333 | 5618 | 5003 | 4466 | 3987 | 3556 | 3164 | 35   |
| 36   | 1.6021           | 1.1761 | 0.9652 | 8239 | 7174 | 6320 | 5607 | 4994 | 4457 | 3979 | 3549 | 3157 | 36   |
| 37   | 1.5902           | 1.1716 | 0.9625 | 8219 | 7159 | 6307 | 5596 | 4984 | 4449 | 3972 | 3542 | 3151 | 37   |
| 38   | 1.5786           | 1.1671 | 0.9597 | 8199 | 7143 | 6294 | 5585 | 4975 | 4440 | 3964 | 3535 | 3145 | 38   |
| 39   | 1.5673           | 1.1627 | 0.9570 | 8179 | 7128 | 6282 | 5574 | 4965 | 4432 | 3957 | 3529 | 3139 | 39   |
|  | 0                | 1      | 2      | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   |      |

Proportional Logarithms for finding planets' places—*contd.*

| Min. | Degrees or Hours |      |      |      |      |      |      |      |      |      |      |      | Min |
|------|------------------|------|------|------|------|------|------|------|------|------|------|------|-----|
|      | 12               | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   | 21   | 22   | 23   |     |
| 0    | 3010             | 2663 | 2341 | 2041 | 1761 | 1498 | 1249 | 1015 | 0792 | 0580 | 0378 | 0185 | 0   |
| 1    | 3004             | 2657 | 2336 | 2036 | 1756 | 1493 | 1245 | 1011 | 0788 | 0577 | 0375 | 0182 | 1   |
| 2    | 2998             | 2652 | 2330 | 2032 | 1752 | 1489 | 1241 | 1007 | 0785 | 0573 | 0371 | 0179 | 2   |
| 3    | 2992             | 2646 | 2325 | 2027 | 1747 | 1485 | 1237 | 1003 | 0781 | 0570 | 0368 | 0175 | 3   |
| 4    | 2986             | 2640 | 2320 | 2022 | 1743 | 1481 | 1233 | 0999 | 0777 | 0566 | 0365 | 0172 | 4   |
| 5    | 2980             | 2635 | 2315 | 2017 | 1738 | 1476 | 1229 | 0996 | 0774 | 0563 | 0361 | 0169 | 5   |
| 6    | 2974             | 2629 | 2310 | 2012 | 1734 | 1472 | 1225 | 0992 | 0770 | 0559 | 0358 | 0166 | 6   |
| 7    | 2968             | 2624 | 2305 | 2008 | 1729 | 1468 | 1221 | 0988 | 0767 | 0556 | 0355 | 0163 | 7   |
| 8    | 2962             | 2618 | 2300 | 2003 | 1725 | 1464 | 1217 | 0984 | 0763 | 0552 | 0352 | 0160 | 8   |
| 9    | 2956             | 2613 | 2295 | 1998 | 1720 | 1459 | 1213 | 0980 | 0759 | 0549 | 0348 | 0157 | 9   |
| 10   | 2950             | 2607 | 2289 | 1993 | 1716 | 1455 | 1209 | 0977 | 0756 | 0546 | 0345 | 0154 | 10  |
| 11   | 2944             | 2602 | 2284 | 1988 | 1711 | 1451 | 1205 | 0973 | 0752 | 0542 | 0342 | 0150 | 11  |
| 12   | 2938             | 2596 | 2279 | 1984 | 1707 | 1447 | 1201 | 0969 | 0749 | 0539 | 0339 | 0147 | 12  |
| 13   | 2933             | 2591 | 2274 | 1979 | 1702 | 1443 | 1197 | 0965 | 0745 | 0535 | 0335 | 0144 | 13  |
| 14   | 2927             | 2585 | 2269 | 1974 | 1698 | 1438 | 1193 | 0962 | 0741 | 0532 | 0332 | 0141 | 14  |
| 15   | 2921             | 2580 | 2264 | 1969 | 1694 | 1434 | 1190 | 0958 | 0738 | 0529 | 0329 | 0138 | 15  |
| 16   | 2915             | 2574 | 2259 | 1965 | 1689 | 1430 | 1186 | 0954 | 0734 | 0525 | 0326 | 0135 | 16  |
| 17   | 2909             | 2569 | 2254 | 1960 | 1685 | 1426 | 1182 | 0950 | 0731 | 0522 | 0322 | 0132 | 17  |
| 18   | 2903             | 2564 | 2249 | 1955 | 1680 | 1422 | 1178 | 0947 | 0727 | 0518 | 0319 | 0129 | 18  |
| 19   | 2897             | 2558 | 2244 | 1950 | 1676 | 1417 | 1174 | 0943 | 0724 | 0515 | 0316 | 0126 | 19  |
| 20   | 2891             | 2553 | 2239 | 1946 | 1671 | 1413 | 1170 | 0939 | 0720 | 0512 | 0313 | 0122 | 20  |
| 21   | 2885             | 2547 | 2234 | 1941 | 1667 | 1409 | 1166 | 0935 | 0716 | 0508 | 0309 | 0119 | 21  |
| 22   | 2880             | 2542 | 2229 | 1936 | 1662 | 1405 | 1162 | 0932 | 0713 | 0505 | 0306 | 0116 | 22  |
| 23   | 2874             | 2536 | 2223 | 1932 | 1658 | 1401 | 1158 | 0928 | 0709 | 0501 | 0303 | 0113 | 23  |
| 24   | 2868             | 2531 | 2218 | 1927 | 1654 | 1397 | 1154 | 0924 | 0706 | 0498 | 0300 | 0110 | 24  |
| 25   | 2862             | 2526 | 2213 | 1922 | 1649 | 1392 | 1150 | 0920 | 0702 | 0495 | 0296 | 0107 | 25  |
| 26   | 2856             | 2520 | 2208 | 1917 | 1645 | 1388 | 1146 | 0917 | 0699 | 0491 | 0293 | 0104 | 26  |
| 27   | 2850             | 2515 | 2203 | 1913 | 1640 | 1384 | 1142 | 0913 | 0695 | 0488 | 0290 | 0101 | 27  |
| 28   | 2845             | 2509 | 2198 | 1908 | 1636 | 1380 | 1138 | 0909 | 0692 | 0484 | 0287 | 0098 | 28  |
| 29   | 2839             | 2504 | 2193 | 1903 | 1632 | 1376 | 1134 | 0906 | 0688 | 0481 | 0284 | 0095 | 29  |
| 30   | 2833             | 2499 | 2188 | 1899 | 1627 | 1372 | 1130 | 0902 | 0685 | 0478 | 0280 | 0091 | 30  |
| 31   | 2827             | 2493 | 2183 | 1894 | 1623 | 1368 | 1127 | 0898 | 0681 | 0474 | 0277 | 0088 | 31  |
| 32   | 2821             | 2488 | 2178 | 1889 | 1618 | 1364 | 1123 | 0894 | 0678 | 0471 | 0274 | 0085 | 32  |
| 33   | 2816             | 2483 | 2173 | 1885 | 1614 | 1359 | 1119 | 0891 | 0674 | 0468 | 0271 | 0082 | 33  |
| 34   | 2810             | 2477 | 2168 | 1880 | 1610 | 1355 | 1115 | 0887 | 0671 | 0464 | 0267 | 0079 | 34  |
| 35   | 2804             | 2472 | 2164 | 1875 | 1605 | 1351 | 1111 | 0883 | 0667 | 0461 | 0264 | 0076 | 35  |
| 36   | 2798             | 2467 | 2159 | 1871 | 1601 | 1347 | 1107 | 0880 | 0663 | 0458 | 0261 | 0073 | 36  |
| 37   | 2793             | 2461 | 2154 | 1866 | 1597 | 1343 | 1103 | 0876 | 0660 | 0454 | 0258 | 0070 | 37  |
| 38   | 2787             | 2456 | 2149 | 1862 | 1592 | 1339 | 1099 | 0872 | 0656 | 0451 | 0255 | 0067 | 38  |
| 39   | 2781             | 2451 | 2144 | 1857 | 1588 | 1335 | 1095 | 0869 | 0653 | 0448 | 0251 | 0064 | 39  |
| 12   | 13               | 14   | 15   | 16   | 17   | 18   | 19   | 20   | 21   | 22   | 23   |      |     |

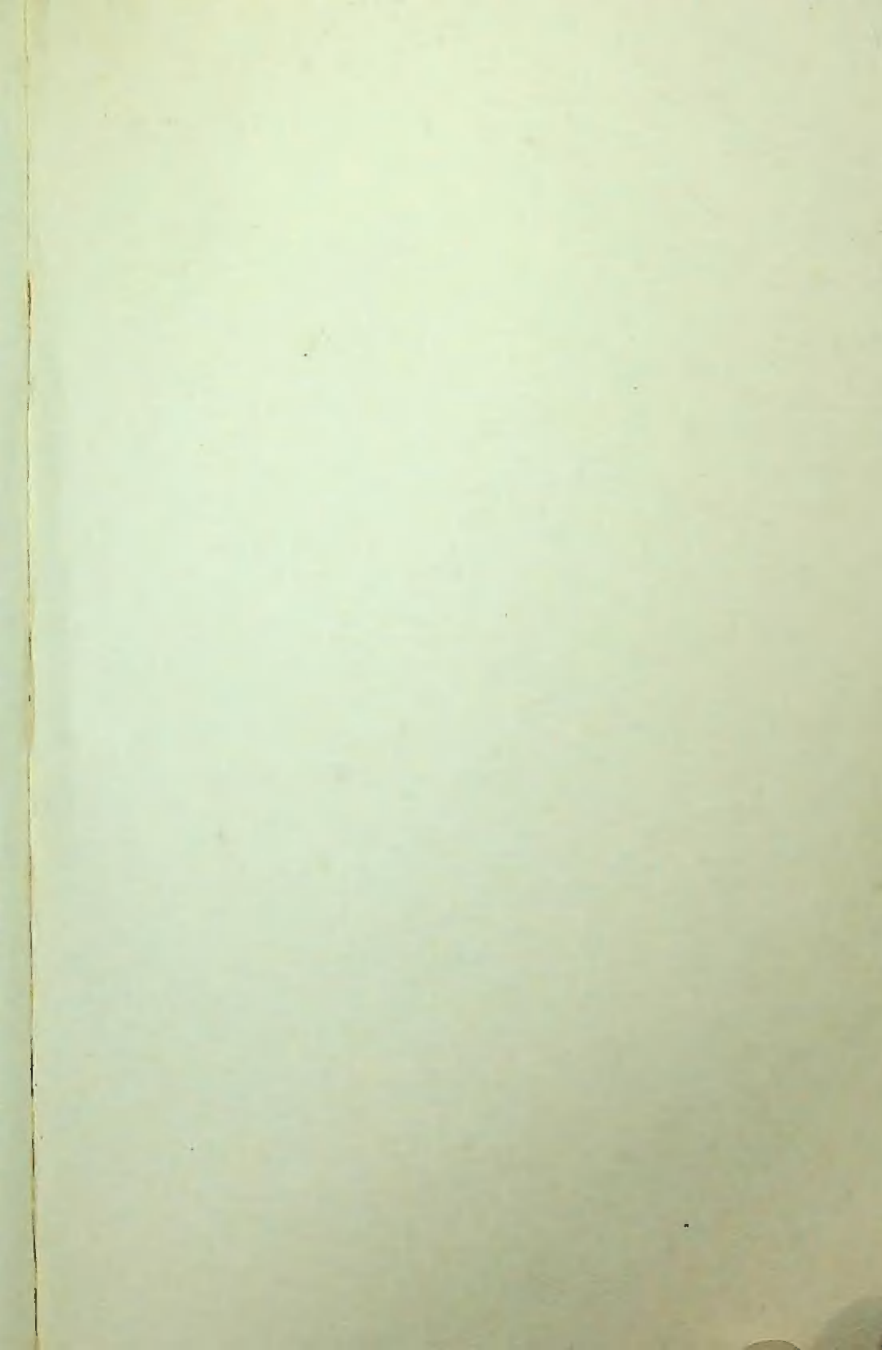


Proportional Logarithms for finding planets' places—*contd.*

| Proportional Logarithms for Landing |                  |        |        |      |      |      |      |      |      |      |      |      |    |
|-------------------------------------|------------------|--------|--------|------|------|------|------|------|------|------|------|------|----|
| Min.                                | Degrees or Hours |        |        |      |      |      |      |      |      |      |      | Min. |    |
|                                     | 0                | 1      | 2      | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   |      | 11 |
| 40                                  | 1.5563           | 1.1584 | 0.9542 | 8159 | 7112 | 6269 | 5563 | 4956 | 4424 | 3949 | 3522 | 3133 | 40 |
| 41                                  | 1.5456           | 1.1540 | 0.9515 | 8140 | 7097 | 6256 | 5552 | 4947 | 4415 | 3942 | 3515 | 3126 | 41 |
| 42                                  | 1.5351           | 1.1498 | 0.9488 | 8120 | 7081 | 6243 | 5541 | 4937 | 4407 | 3934 | 3508 | 3120 | 42 |
| 43                                  | 1.5249           | 1.1455 | 0.9462 | 8101 | 7066 | 6231 | 5531 | 4928 | 4399 | 3927 | 3501 | 3114 | 43 |
| 44                                  | 1.5149           | 1.1413 | 0.9435 | 8081 | 7050 | 6218 | 5520 | 4918 | 4390 | 3919 | 3495 | 3108 | 44 |
| 45                                  | 1.5051           | 1.1372 | 0.9409 | 8062 | 7035 | 6205 | 5509 | 4909 | 4382 | 3912 | 3488 | 3102 | 45 |
| 46                                  | 1.4956           | 1.1331 | 0.9383 | 8043 | 7020 | 6193 | 5498 | 4900 | 4374 | 3905 | 3481 | 3096 | 46 |
| 47                                  | 1.4863           | 1.1290 | 0.9356 | 8023 | 7005 | 6180 | 5488 | 4890 | 4365 | 3897 | 3475 | 3089 | 47 |
| 48                                  | 1.4771           | 1.1249 | 0.9330 | 8004 | 6990 | 6168 | 5477 | 4881 | 4357 | 3890 | 3468 | 3083 | 48 |
| 49                                  | 1.4682           | 1.1209 | 0.9305 | 7985 | 6975 | 6155 | 5466 | 4872 | 4349 | 3882 | 3461 | 3077 | 49 |
| 50                                  | 1.4594           | 1.1170 | 0.9279 | 7966 | 6960 | 6143 | 5456 | 4863 | 4341 | 3875 | 3454 | 3071 | 50 |
| 51                                  | 1.4508           | 1.1130 | 0.9254 | 7947 | 6945 | 6131 | 5445 | 4853 | 4333 | 3868 | 3448 | 3065 | 51 |
| 52                                  | 1.4424           | 1.1091 | 0.9228 | 7929 | 6930 | 6118 | 5435 | 4844 | 4324 | 3860 | 3441 | 3059 | 52 |
| 53                                  | 1.4341           | 1.1053 | 0.9203 | 7910 | 6915 | 6106 | 5424 | 4835 | 4316 | 3853 | 3434 | 3053 | 53 |
| 54                                  | 1.4260           | 1.1015 | 0.9178 | 7891 | 6900 | 6094 | 5414 | 4826 | 4308 | 3846 | 3428 | 3047 | 54 |
| 55                                  | 1.4180           | 1.0977 | 0.9153 | 7873 | 6885 | 6081 | 5403 | 4817 | 4300 | 3838 | 3421 | 3041 | 55 |
| 56                                  | 1.4102           | 1.0939 | 0.9128 | 7854 | 6871 | 6069 | 5393 | 4808 | 4292 | 3831 | 3415 | 3034 | 56 |
| 57                                  | 1.4025           | 1.0902 | 0.9104 | 7836 | 6856 | 6057 | 5382 | 4798 | 4284 | 3824 | 3408 | 3028 | 57 |
| 58                                  | 1.3949           | 1.0865 | 0.9079 | 7818 | 6841 | 6045 | 5372 | 4789 | 4276 | 3817 | 3401 | 3022 | 58 |
| 59                                  | 1.3875           | 1.0828 | 0.9055 | 7800 | 6827 | 6033 | 5361 | 4780 | 4268 | 3809 | 3395 | 3016 | 59 |
|                                     | 0                | 1      | 2      | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   |    |

Proportional Logarithms for finding planets' places — *contd.*

| Min | Degrees or Hours |      |      |      |      |      |      |      |      |      |      |      | Min. |
|-----|------------------|------|------|------|------|------|------|------|------|------|------|------|------|
|     | 12               | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   | 21   | 22   | 23   |      |
| 40  | 2775             | 2445 | 2139 | 1852 | 1584 | 1331 | 1091 | 0865 | 0649 | 0444 | 0248 | 0061 | 40   |
| 41  | 2770             | 2440 | 2134 | 1848 | 1579 | 1326 | 1088 | 0861 | 0646 | 0441 | 0245 | 0058 | 41   |
| 42  | 2764             | 2435 | 2129 | 1843 | 1575 | 1322 | 1084 | 0858 | 0642 | 0438 | 0242 | 0055 | 42   |
| 43  | 2758             | 2430 | 2124 | 1838 | 1571 | 1318 | 1080 | 0854 | 0639 | 0434 | 0239 | 0052 | 43   |
| 44  | 2753             | 2424 | 2119 | 1834 | 1566 | 1314 | 1076 | 0850 | 0635 | 0431 | 0236 | 0049 | 44   |
| 45  | 2747             | 2419 | 2114 | 1829 | 1562 | 1310 | 1072 | 0847 | 0632 | 0428 | 0232 | 0046 | 45   |
| 46  | 2741             | 2414 | 2109 | 1825 | 1558 | 1306 | 1068 | 0843 | 0628 | 0424 | 0229 | 0042 | 46   |
| 47  | 2736             | 2409 | 2104 | 1820 | 1553 | 1302 | 1064 | 0839 | 0625 | 0421 | 0226 | 0039 | 47   |
| 48  | 2730             | 2403 | 2099 | 1816 | 1549 | 1298 | 1061 | 0835 | 0622 | 0418 | 0223 | 0036 | 48   |
| 49  | 2724             | 2398 | 2095 | 1811 | 1545 | 1294 | 1057 | 0832 | 0618 | 0414 | 0220 | 0033 | 49   |
| 50  | 2719             | 2393 | 2090 | 1806 | 1540 | 1290 | 1053 | 0828 | 0615 | 0411 | 0216 | 0030 | 50   |
| 51  | 2713             | 2388 | 2085 | 1802 | 1536 | 1286 | 1049 | 0825 | 0611 | 0408 | 0213 | 0027 | 51   |
| 52  | 2707             | 2382 | 2080 | 1797 | 1532 | 1282 | 1045 | 0821 | 0608 | 0404 | 0210 | 0024 | 52   |
| 53  | 2702             | 2377 | 2075 | 1793 | 1528 | 1278 | 1041 | 0817 | 0604 | 0401 | 0207 | 0021 | 53   |
| 54  | 2696             | 2372 | 2070 | 1788 | 1523 | 1274 | 1038 | 0814 | 0601 | 0398 | 0204 | 0018 | 54   |
| 55  | 2691             | 2367 | 2065 | 1784 | 1519 | 1270 | 1034 | 0810 | 0597 | 0394 | 0201 | 0015 | 55   |
| 56  | 2685             | 2362 | 2061 | 1779 | 1515 | 1266 | 1030 | 0806 | 0594 | 0391 | 0197 | 0012 | 56   |
| 57  | 2679             | 2356 | 2056 | 1774 | 1510 | 1261 | 1026 | 0803 | 0590 | 0388 | 0194 | 0009 | 57   |
| 58  | 2674             | 2351 | 2051 | 1770 | 1506 | 1257 | 1022 | 0799 | 0587 | 0384 | 0191 | 0006 | 58   |
| 59  | 2668             | 2346 | 2046 | 1765 | 1502 | 1253 | 1018 | 0795 | 0583 | 0381 | 0188 | 0003 | 59   |
|     | 12               | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   | 21   | 22   | 23   |      |



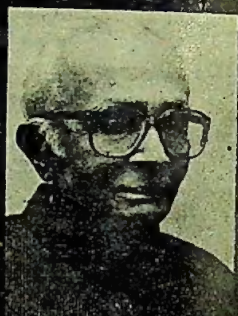


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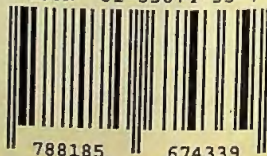
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